



## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 63**

**[EPA-HQ-OAR-2018-0747; FRL-9998-69-OAR]**

**RIN 2060-AU16**

### **National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing Residual Risk and Technology Review**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The U.S. Environmental Protection Agency (EPA) is proposing the results of a residual risk and technology review (RTR) of the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing (MCM NESHAP) facilities, as required by the Clean Air Act (CAA). The EPA is proposing to find risks due to emissions of air toxics to be acceptable from the MCM source category and to determine that the current NESHAP provides an ample margin of safety to protect public health. The EPA identified no new cost-effective controls under the technology review to achieve further emissions reductions from process units subject to standards under the NESHAP. The EPA is also proposing revisions related to emissions during periods of startup, shutdown, and malfunction (SSM), including clarifying regulatory provisions for certain vent control bypasses; provisions for electronic reporting of performance test results, performance evaluation reports, compliance reports, and Notification of Compliance Status (NOCS) reports; and provisions to conduct periodic performance testing of oxidizers used to reduce emissions of organic hazardous air pollutants (HAP).

**DATES: Comments.** Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*Public hearing.* If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document and posted at <https://www.epa.gov/stationary-sources-air-pollution/miscellaneous-coating-manufacturing-national-emission-standards>. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA-HQ-OAR-2018-0747, by any of the following methods:

- Federal eRulemaking Portal: <https://www.regulations.gov/> (our preferred method) Follow the online instructions for submitting comments.
- Email: [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov). Include Docket ID No. EPA-HQ-OAR-2018-0747 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2018-0747.

- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2018-0747, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
- Hand/Courier Delivery: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. – 4:30 p.m., Monday – Friday (except federal holidays).

*Instructions:* All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FURTHER INFORMATION CONTACT:** For questions about this proposed action, contact Ms. Angela Carey, Sector Policies and Programs Division (E143-01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2187; fax number: (919) 541-0516; and email address: [carey.angela@epa.gov](mailto:carey.angela@epa.gov). For specific information regarding the risk modeling methodology, contact Ms. Darcie Smith, Health and Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2076; fax number: (919) 541-0840; and email address: [smith.darcie@epa.gov](mailto:smith.darcie@epa.gov). For questions about monitoring and testing requirements, contact Mr. Barrett Parker, Sector Policies and Programs Division (D243-05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5635; fax number: (919)

541-4991; and email address: *parker.barrett@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Mr. John Cox, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, WJC South Building (Mail Code 2227A), 1200 Pennsylvania Avenue, NW, Washington DC 20460; telephone number: (202) 564-1395; and email address: *cox.john@epa.gov*.

**SUPPLEMENTARY INFORMATION:**

*Public hearing.* Please contact Ms. Virginia Hunt at (919) 541-0832 or by email at *hunt.virginia@epa.gov* to request a public hearing, to register to speak at the public hearing, or to inquire as to whether a public hearing will be held.

*Docket.* The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2018-0747. All documents in the docket are listed in Regulations.gov. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in Regulations.gov or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue, NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

*Instructions.* Direct your comments to Docket ID No. EPA-HQ-OAR-2018-0747. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <https://www.regulations.gov/>, including any personal

information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <https://www.regulations.gov/> or email. This type of information should be submitted by mail as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

The <https://www.regulations.gov/> website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <https://www.regulations.gov/>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be

free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <https://www.epa.gov/dockets>.

*Submitting CBI.* Do not submit information containing CBI to the EPA through <https://www.regulations.gov/> or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, mark the outside of the digital storage media as CBI and then identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2018-0747.

*Preamble acronyms and abbreviations.* We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AEGL	acute exposure guideline level
AERMOD	air dispersion model used by the HEM-3 model
CAA	Clean Air Act
CalEPA	California EPA
CBI	Confidential Business Information

CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
ERPG	emergency response planning guideline
ERT	Electronic Reporting Tool
HAP	hazardous air pollutant(s)
HCl	hydrochloric acid
HEM-3	Human Exposure Model, Version 1.5.5
HF	hydrogen fluoride
HI	hazard index
HQ	hazard quotient
ICR	Information Collection Request
IRIS	Integrated Risk Information System
km	kilometer
kPa	kilopascal
MACT	maximum achievable control technology
MCM	miscellaneous coating manufacturing
mg/kg-day	milligrams per kilogram per day
mg/m <sup>3</sup>	milligrams per cubic meter
MIR	maximum individual lifetime (cancer) risk
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NESHAP	national emission standards for hazardous air pollutants
NOCS	Notification of Compliance Status
NRC	National Research Council
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OECA	Office of Enforcement and Compliance Assurance
OMB	Office of Management and Budget
PAH	polycyclic aromatic hydrocarbons
PB-HAP	hazardous air pollutants known to be persistent and bio-accumulative in the environment
PDF	portable document format
PM	particulate matter
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight

psia	pounds per square inch, absolute
RBLC	Reasonably Available Control Technology, Best Available Control Technology, and Lowest Achievable Emission Rate Clearinghouse
REL	reference exposure level
RFA	Regulatory Flexibility Act
RfC	reference concentration
RfD	reference dose
RTR	residual risk and technology review
SAB	Science Advisory Board
SSM	startup, shutdown, and malfunction
the Court	the United States Court of Appeals for the District of Columbia Circuit
TOSHI	target organ-specific hazard index
tpy	tons per year
TRIM.FaTE	Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure model
UF	uncertainty factor
$\mu\text{g}/\text{m}^3$	microgram per cubic meter
UMRA	Unfunded Mandates Reform Act
URE	unit risk estimate
VCS	voluntary consensus standards
VOC	volatile organic compounds

*Organization of this document.* The information in this preamble is organized as follows below. In particular, section IV of this preamble describes the majority of the Agency's rationale for the proposed actions in this preamble.

Section IV.B of this preamble summarizes the results of the risk assessment. Section IV.C of this preamble summarizes the results of our technology review. Section IV.D of this preamble summarizes other changes we are proposing, including general regulatory language changes related to the removal of SSM exemptions, electronic reporting, and other minor clarifications identified as part our review of the NESHAP and as part of the other proposed revisions in this action. Lastly, section IV.E of this preamble summarizes our rationale for the compliance dates we are proposing.

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## **I. General Information**

*A. Does this action apply to me?*

Table 1 of this preamble lists the NESHAP and associated regulated industrial source categories that are the subject of this proposal. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding the entities that this proposed action is likely to affect. The proposed standards, once promulgated, will be directly applicable to the affected sources. Federal, state, local, and tribal government entities would not be affected by this proposed action. As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (see EPA-450/3-91-030, July 1992), the Manufacture of Paints, Coatings, and Adhesives source category “is any facility engaged in their manufacture without regard to the particular end-uses or consumers of such products. The manufacturing of these products may occur in any combination at any facility.” This source category has since been renamed Miscellaneous Coating Manufacturing (MCM).

**Table 1. NESHAP and Industrial Source Categories Affected By This Proposed Action**

<b>Source Category and NESHAP</b>	<b>NAICS Code<sup>1</sup></b>
Miscellaneous Coating Manufacturing Industry	3255, 3259

<sup>1</sup> North American Industry Classification System.

*B. Where can I get a copy of this document and other related information?*

In addition to being available in the docket, an electronic copy of this action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at <https://www.epa.gov/stationary-sources-air-pollution/miscellaneous-coating-manufacturing-national-emission-standards>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal and key technical documents at this

same website. Information on the overall RTR program is available at

<https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html>.

A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0747).

## **II. Background**

### *A. What is the statutory authority for this action?*

The statutory authority for this action is provided by sections 112 and 301 of the CAA, as amended (42 U.S.C. 7401 *et seq.*). Section 112 of the CAA establishes a two-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards and the second stage involves evaluating those standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions. This second stage is commonly referred to as the “residual risk review.” In addition to the residual risk review, the CAA also requires the EPA to review standards set under CAA section 112 every 8 years to determine if there are “developments in practices, processes, or control technologies” that may be appropriate to incorporate into the standards. This review is commonly referred to as the “technology review.” When the two reviews are combined into a single rulemaking, it is commonly referred to as the “risk and technology review.” The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory provisions. A more comprehensive discussion appears in the document titled *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology*, in the docket for this rulemaking.

In the first stage of the CAA section 112 standard setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different provisions for major source standards and area source standards. “Major sources” are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. All other sources are “area sources.” For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy provisions, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT “floor.” The EPA must also consider control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as beyond-the-floor standards. In certain instances, as provided in CAA section 112(h), the EPA may set work practice standards where it is not feasible to prescribe or enforce a numerical emission standard. For area sources, CAA section 112(d)(5) gives the EPA discretion to set standards based on generally available control technologies or management practices (GACT standards) in lieu of MACT standards.

The second stage in standard-setting focuses on identifying and addressing any remaining (*i.e.*, “residual”) risk according to CAA section 112(f). For source categories subject to MACT standards, section 112(f)(2) of the CAA requires the EPA to determine whether promulgation of additional standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. Section 112(d)(5) of the CAA provides that this

residual risk review is not required for categories of area sources subject to GACT standards. Section 112(f)(2)(B) of the CAA further expressly preserves the EPA's use of the two-step approach for developing standards to address any residual risk and the Agency's interpretation of "ample margin of safety" developed in the *National Emissions Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants* (Benzene NESHAP) (54 FR 38044, September 14, 1989). The EPA notified Congress in the Risk Report that the Agency intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA-453/R-99-001, p. ES-11). The EPA subsequently adopted this approach in its residual risk determinations and the United States Court of Appeals for the District of Columbia Circuit (the Court) upheld the EPA's interpretation that CAA section 112(f)(2) incorporates the approach established in the Benzene NESHAP. See *NRDC v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008).

The approach incorporated into the CAA and used by the EPA to evaluate residual risk and to develop standards under CAA section 112(f)(2) is a two-step approach. In the first step, the EPA determines whether risks are acceptable. This determination "considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual lifetime (cancer) risk (MIR)<sup>1</sup> of approximately 1-in-10 thousand." 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions standards necessary to reduce risk to an acceptable level without considering costs. In the second step of the approach, the EPA considers whether the emissions standards provide an ample

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<sup>1</sup> Although defined as "maximum individual risk," MIR refers only to cancer risk. MIR, one metric for assessing cancer risk, is the estimated risk if an individual were exposed to the maximum level of a pollutant for a lifetime.

margin of safety to protect public health “in consideration of all health information, including the number of persons at risk levels higher than approximately 1 in 1 million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision.” *Id.* The EPA must promulgate emission standards necessary to provide an ample margin of safety to protect public health or determine that the standards being reviewed provide an ample margin of safety without any revisions. After conducting the ample margin of safety analysis, we consider whether a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

CAA section 112(d)(6) separately requires the EPA to review standards promulgated under CAA section 112 and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less often than every 8 years. In conducting this review, which we call the “technology review,” the EPA is not required to recalculate the MACT floor. *Natural Resources Defense Council (NRDC) v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008). *Association of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

*B. What is this source category and how does the current NESHAP regulate its HAP emissions?*

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (see EPA-450/3-91-030, July 1992), the “manufacture of paints, coatings, and adhesives” source category “is any facility engaged in

their manufacture without regard to the particular end-uses or consumers of such products. The manufacturing of these products may occur in any combination at any facility.”

The MCM source category includes the collection of equipment that is used to manufacture coatings at a facility. MCM operations also include cleaning operations. Coatings are materials such as paints, inks, or adhesive that are intended to be applied to a substrate and consist of a mixture of resins, pigments, solvents, and/or other additives, where the material is produced by a manufacturing operation where materials are blended, mixed, diluted, or otherwise formulated. Coatings do not include materials made in processes where a formulation component is synthesized by chemical reaction or separation activity and then transferred to another vessel where it is formulated to produce a material used as a coating, where the synthesized or separated component is not stored prior to formulation.

The equipment controlled by the MCM NESHAP includes process vessels, storage tanks for feedstocks and products, equipment leak components (pumps, compressors, agitators, pressure relief devices (PRDs), sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems), wastewater tanks, heat exchangers, and transfer racks.

The current NESHAP regulates process vessels and storage tanks based on the volume of the process vessel or storage tank and the maximum true vapor pressure of the organic HAP processed or stored. Control requirements range from the use of tightly fitted lids on process vessels to also capturing and reducing organic HAP emissions through the use of add-on controls (*i.e.*, a flare, oxidizer, or condenser). For halogenated vent streams from process vessels and storage tanks, the use of a flare is prohibited, and a halogen reduction device (*i.e.*, an acid gas scrubber) is required after a combustion control device. For storage tanks, facilities may comply

with the provisions in 40 CFR part 63, subpart HHHHH, by complying with the provisions in 40 CFR part 63, subpart WW.

The NESHAP regulates emissions from equipment leaks at existing sources by requiring compliance with leak inspection and repair provisions using sight, sound, and smell in 40 CFR part 63, subpart R, or alternatively, the leak detection and repair (LDAR) provisions in 40 CFR part 63, subparts TT or UU. New sources are required to comply with the LDAR provisions in 40 CFR part 63, subparts TT or UU.

The NESHAP regulates wastewater streams by requiring the use of fixed roofs on wastewater tanks, treating the wastewater (either on-site or off-site) as a hazardous waste under 40 CFR 264, 265, or 266, or using enhanced biological treatment if the wastewater contains less than 50 parts per million by weight (ppmw) of partially soluble HAP. If the wastewater is treated as a hazardous waste under 40 CFR 264, 265, or 266, it may be treated by steam stripping or incineration. These standards apply only to wastewater streams that contain total partially soluble and soluble HAP at an annual average concentration greater than or equal to 4,000 ppmw and loads greater than or equal to 750 pounds per year (lb/yr) at an existing source or greater than or equal to 1,600 ppmw and any partially soluble and soluble HAP load at a new source.

The NESHAP regulates transfer operations if the operation involves the bulk loading of coating products that contain 3.0 million gallons (gal) per year or more of HAP with a weighted average HAP partial pressure greater than or equal to 1.5 pounds per square inch, absolute (psia). Regulated transfer operations are required to reduce emissions by using a closed vent system and a control device (other than a flare) to reduce emissions by at least 75 percent; using a closed vent system and a flare for a non-halogenated vent stream; or using a vapor balancing system. If a non-flare combustion device is used to control a halogenated vent stream, then a halogen

reduction device must be used either before or after the combustion device. If used after the combustion device, the halogen reduction device must meet either a minimum 95-percent reduction or a maximum 0.45 kilograms per hour (kg/hr) emission rate of hydrogen halide or halogen. If used before the combustion device, the halogen reduction device must meet a maximum 0.45 kg/hr emission rate of hydrogen halide or halogen.

The NESHAP requires heat exchangers to meet the provisions of subpart F, 40 CFR 63.104. Section 63.104 requires the implementation of a LDAR or monitoring program for heat exchange systems, unless the system meets certain design and operation provisions, or it is a once-through system that meets certain National Pollution Discharge Elimination System (NPDES) permit provisions.

*C. What data collection activities were conducted to support this action?*

The EPA held discussions with the American Coatings Association and the American Chemistry Council. During these meetings, we obtained supplemental information about the emission inventory, emission processes, control technologies, and speciation profiles.

*D. What other relevant background information and data are available?*

The EPA used information from the Reasonably Available Control Technology, Best Available Control Technology, and Lowest Achievable Emission Rate Clearinghouse (RBLC) database, reviewed title V permits for each MCM facility, and reviewed NOCS reports. The EPA reviewed the RBLC to identify potential additional control technologies. No additional control technologies applicable to MCM were found in the RBLC. See sections III.B and IV.D of this preamble and the memorandum, “*Technology Review for the Miscellaneous Coating Manufacturing Source Category*,” which is available in the docket for this action.

Lastly, the EPA is incorporating into the docket for this rulemaking, all materials associated with the development of the current MCM standards from Docket ID No. A-96-04 and Docket ID No. EPA-HQ-OAR-2003-0178. Publicly available docket materials are available either electronically at <https://www.regulations.gov/>, or in hard copy at the EPA Docket Center, EPA WJC West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

### **III. Analytical Procedures and Decision-Making**

In this section, we describe the analyses performed to support the proposed decisions for the RTR and other issues addressed in this action.

#### *A. How do we consider risk in our decision-making?*

As discussed in section II.A of this preamble and in the Benzene NESHAP, in evaluating and developing standards under CAA section 112(f)(2), we apply a two-step approach to determine whether or not risks are acceptable and to determine if the standards provide an ample margin of safety to protect public health. As explained in the Benzene NESHAP, “the first step judgment on acceptability cannot be reduced to any single factor” and, thus, “[t]he Administrator believes that the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information.” 54 FR 38046, September 14, 1989. Similarly, with regard to the ample margin of safety determination, “the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and

economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors.” *Id.*

The Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source category. The EPA conducts a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects, and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause noncancer health effects.<sup>2</sup> The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The scope of the EPA’s risk analysis is consistent with the EPA’s response to comments on our policy under the Benzene NESHAP where the EPA explained that:

“[t]he policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of non-cancer health effects, and the uncertainties of the risk estimates. In this way, the effect on the most exposed individuals can be reviewed as well as the impact on the general public. These factors can then be weighed in each individual case. This approach complies with the *Vinyl Chloride* mandate that the Administrator ascertain an acceptable level of risk to the public by employing his expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA’s consideration with respect to CAA section 112 regulations, and thereby implicitly permits consideration of any and all measures of health risk which the Administrator, in his judgment, believes are appropriate to determining what will ‘protect the public health’.”

See 54 FR 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risk. The Benzene NESHAP explained that “an MIR of

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<sup>2</sup> The MIR is defined as the cancer risk associated with a lifetime of exposure at the highest concentration of HAP where people are likely to live. The HQ is the ratio of the potential HAP exposure concentration to the noncancer dose-response value; the HI is the sum of HQs for HAP that affect the same target organ or organ system.

approximately one in 10 thousand should ordinarily be the upper end of the range of acceptability. As risks increase above this benchmark, they become presumptively less acceptable under CAA section 112, and would be weighed with the other health risk measures and information in making an overall judgment on acceptability. Or, the Agency may find, in a particular case, that a risk that includes an MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors.” *Id.* at 38045. In other words, risks that include an MIR above 100-in-1 million may be determined to be acceptable, and risks with an MIR below that level may be determined to be unacceptable, depending on all of the available health information. Similarly, with regard to the ample margin of safety analysis, the EPA stated in the Benzene NESHAP that: “EPA believes the relative weight of the many factors that can be considered in selecting an ample margin of safety can only be determined for each specific source category. This occurs mainly because technological and economic factors (along with the health-related factors) vary from source category to source category.” *Id.* at 38061. We also consider the uncertainties associated with the various risk analyses, as discussed earlier in this preamble, in our determinations of acceptability and ample margin of safety.

The EPA notes that it has not considered certain health information to date in making residual risk determinations. At this time, we do not attempt to quantify the HAP risk that may be associated with emissions from other facilities that do not include the source category under review, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in the category.

The EPA understands the potential importance of considering an individual’s total exposure to HAP in addition to considering exposure to HAP emissions from the source category and facility. We recognize that such consideration may be particularly important when assessing

noncancer risk, where pollutant-specific exposure health reference levels (*e.g.*, reference concentrations (RfCs)) are based on the assumption that thresholds exist for adverse health effects. For example, the EPA recognizes that, although exposures attributable to emissions from a source category or facility alone may not indicate the potential for increased risk of adverse noncancer health effects in a population, the exposures resulting from emissions from the facility in combination with emissions from all of the other sources (*e.g.*, other facilities) to which an individual is exposed may be sufficient to result in an increased risk of adverse noncancer health effects. In May 2010, the Science Advisory Board (SAB) advised the EPA “that RTR assessments will be most useful to decision makers and communities if results are presented in the broader context of aggregate and cumulative risks, including background concentrations and contributions from other sources in the area.”<sup>3</sup>

In response to the SAB recommendations, the EPA incorporates cumulative risk analyses into its RTR risk assessments, including those reflected in this action. The Agency (1) conducts facility-wide assessments, which include source category emission points, as well as other emission points within the facilities; (2) combines exposures from multiple sources in the same category that could affect the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzes the ingestion route of exposure. In addition, the RTR risk assessments consider aggregate cancer risk from all carcinogens and aggregated noncancer HQs for all noncarcinogens affecting the same target organ or target organ system.

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<sup>3</sup> Recommendations of the SAB Risk and Technology Review Methods Panel are provided in their report, which is available at: [https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/\\$File/EP A-SAB-10-007-unsigned.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EP A-SAB-10-007-unsigned.pdf).

Although we are interested in placing source category and facility-wide HAP risk in the context of total HAP risk from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Estimates of total HAP risk from emission sources other than those that we have studied in depth during this RTR review would have significantly greater associated uncertainties than the source category or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

*B. How do we perform the technology review?*

Our technology review focuses on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the MACT standards were promulgated. Where we identify such developments, we analyze their technical feasibility, estimated costs, energy implications, and non-air environmental impacts. We also consider the emission reductions associated with applying each development. This analysis informs our decision of whether it is “necessary” to revise the emissions standards. In addition, we consider the appropriateness of applying controls to new sources versus retrofitting existing sources. For this exercise, we consider any of the following to be a “development”:

- Any add-on control technology or other equipment that was not identified and considered during development of the original MACT standards;
- Any improvements in add-on control technology or other equipment (that were identified and considered during development of the original MACT standards) that could result in additional emissions reduction;
- Any work practice or operational procedure that was not identified or considered during development of the original MACT standards;

- Any process change or pollution prevention alternative that could be broadly applied to the industry and that was not identified or considered during development of the original MACT standards; and
- Any significant changes in the cost (including cost effectiveness) of applying controls (including controls the EPA considered during the development of the original MACT standards).

In addition to reviewing the practices, processes, and control technologies that were considered at the time we originally developed the NESHAP, we review a variety of data sources in our investigation of potential practices, processes, or controls to consider. See sections II.C and II. D of this preamble for information on the specific data sources that were reviewed as part of the technology review.

*C. How do we estimate post-MACT risk posed by the source category?*

In this section, we provide a complete description of the types of analyses that we generally perform during the risk assessment process. In some cases, we do not perform a specific analysis because it is not relevant. For example, in the absence of emissions of HAP known to be persistent and bioaccumulative in the environment (PB-HAP), we would not perform a multipathway exposure assessment. Where we do not perform an analysis, we state that we do not and provide the reason. While we present all of our risk assessment methods, we only present risk assessment results for the analyses actually conducted (see section IV.B of this preamble).

The EPA conducts a risk assessment that provides estimates of the MIR for cancer posed by the HAP emissions from each source in the source category, the HI for chronic exposures to HAP with the potential to cause noncancer health effects, and the HQ for acute exposures to

HAP with the potential to cause noncancer health effects. The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*. The methods used to assess risk (as described in the seven primary steps below) are consistent with those described by the EPA in the document reviewed by a panel of the EPA's SAB in 2009;<sup>4</sup> and described in the SAB review report issued in 2010. They are also consistent with the key recommendations contained in that report.

1. How did we estimate actual emissions and identify the emissions release characteristics?

For each facility that we determined to be subject to the MACT standards (see section II.B of this preamble), we gathered emissions data from Version 1 of the 2014 National Emissions Inventory (NEI). For each NEI record, we reviewed the source classification code and emission unit and process descriptions, and then assigned the record to an emission source type regulated by the MACT standards (*i.e.*, each record identified as part of the MCM affected source at each facility was labeled storage tank, waste water, process vessel, equipment leak, or unknown) or an emission source type not regulated by the MACT standards (*i.e.*, each record that was not identified as part of the MCM affected source at each facility was labeled non-

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<sup>4</sup> U.S. EPA. *Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing*, June 2009. EPA-452/R-09-006. <https://www3.epa.gov/airtoxics/rrisk/rtrpg.html>.

source category type). The non-source category type emissions sources are units or processes that are co-located at one or more of the MCM facilities but are not part of the MCM source category. For example, some of the MCM affected sources are co-located with organic chemical manufacturing operations that are part of a different source category (*i.e.*, Miscellaneous Organic Chemical Manufacturing) which is regulated by a different NESHAP (40 CFR part 63, subpart FFFF).

The EPA reviewed permits, contacted EPA Regional offices, and asked the American Coatings Association to review (and revise, if necessary) the NEI-based data described above, including emission values, emission release point parameters, coordinates, and emission process group assignments. We used all this information to reevaluate our emission process group assignments for each NEI record in the modeling file. We also used this information to update emission release point parameter data. In other words, we used the industry response data wherever possible (in lieu of the data we established using the NEI and gap fill procedures), unless the data failed certain quality assurance checks.

For further details on the assumptions and methodologies used to estimate actual emissions and identify the emissions release characteristics, see Appendix 1 of *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Categories in Support of the 2019 Risk and Technology Review Proposed Rule*, in Docket ID No. EPA-HQ-OAR-2018-0747.

## 2. How did we estimate MACT-allowable emissions?

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during a specified annual time period. These “actual” emission levels are often lower than the emission levels allowed under the provisions of the current MACT standards. The emissions allowed under the MACT standards are referred to as the “MACT-allowable”

emissions. We discussed the consideration of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed and final Hazardous Organic NESHAP (HON) RTR (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, we noted that assessing the risk at the MACT-allowable level is inherently reasonable since that risk reflects the maximum level facilities could emit and still comply with national emission standards. We also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP approach. (54 FR 38044, September 14, 1989.)

For the risk assessment, we have determined that the actual emissions data are reasonable estimates of the MACT-allowable emissions levels for the MCM source category. In preparation of this RTR, we did not conduct an information collection of the equipment in this source category. Instead, we relied primarily upon the 2014 NEI emissions data and readily available title V permit information to characterize the actual emissions from the source category. In addition, the emission standards in 40 CFR part 63, subpart HHHH are generally equipment and work-practice requirements, rather than numerical emission limits. Therefore, we consider the use of 2014 NEI actual emissions as the best available reasonable approximation of allowable emissions for the risk assessment.

3. How do we conduct dispersion modeling, determine inhalation exposures, and estimate individual and population inhalation risk?

Both long-term and short-term inhalation exposure concentrations and health risk from the source category addressed in this action were estimated using the Human Exposure Model

(HEM-3).<sup>5</sup> The HEM-3 performs three primary risk assessment activities: (1) conducting dispersion modeling to estimate the concentrations of HAP in ambient air, (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 kilometers (km) of the modeled sources, and (3) estimating individual and population-level inhalation risk using the exposure estimates and quantitative dose-response information.

*a. Dispersion Modeling*

The air dispersion model AERMOD, used by the HEM-3 model, is one of the EPA's preferred models for assessing air pollutant concentrations from industrial facilities.<sup>6</sup> To perform the dispersion modeling and to develop the preliminary risk estimates, HEM-3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year (2016) of hourly surface and upper air observations from 824 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block<sup>7</sup> internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which are also used in dispersion calculations. A third library of pollutant-specific dose-response values is used to estimate health risk. These are discussed below.

*b. Risk from Chronic Exposure to HAP*

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<sup>5</sup> For more information about HEM-3, go to <https://www.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem>.

<sup>6</sup> U.S. EPA. Revision to the *Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions* (70 FR 68218, November 9, 2005).

<sup>7</sup> A census block is the smallest geographic area for which census statistics are tabulated.

In developing the risk assessment for chronic exposures, we use the estimated annual average ambient air concentrations of each HAP emitted by each source in the source category. The HAP air concentrations at each nearby census block centroid located within 50 km of the facility are a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044, September 14, 1989) and the limitations of Gaussian dispersion models, including AERMOD.

For each facility, we calculate the maximum individual risk (MIR) as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, 70 years) exposure to the maximum concentration at the centroid of each inhabited census block. We calculate individual cancer risk by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )) by its unit risk estimate (URE). The URE is an upper-bound estimate of an individual's incremental risk of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, we generally use UREs from the EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without IRIS values, we look to other reputable sources of cancer dose-response values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) UREs, where available. In cases where new, scientifically credible dose-response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate. The pollutant-specific dose-response values used to estimate health risk

are available at <https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants>.

To estimate individual lifetime cancer risks associated with exposure to HAP emissions from each facility in the source category, we sum the risks for each of the carcinogenic HAP<sup>8</sup> emitted by the modeled facility. We estimate cancer risk at every census block within 50 km of every facility in the source category. The MIR is the highest individual lifetime cancer risk estimated for any of those census blocks. In addition to calculating the MIR, we estimate the distribution of individual cancer risks for the source category by summing the number of individuals within 50 km of the sources whose estimated risk falls within a specified risk range. We also estimate annual cancer incidence by multiplying the estimated lifetime cancer risk at each census block by the number of people residing in that block, summing results for all of the census blocks, and then dividing this result by a 70-year lifetime.

To assess the risk of noncancer health effects from chronic exposure to HAP, we calculate either an HQ or a target organ-specific hazard index (TOSHI). We calculate an HQ when a single noncancer HAP is emitted. Where more than one noncancer HAP is emitted, we

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<sup>8</sup> The EPA's 2005 *Guidelines for Carcinogen Risk Assessment* classifies carcinogens as: "carcinogenic to humans," "likely to be carcinogenic to humans," and "suggestive evidence of carcinogenic potential." These classifications also coincide with the terms "known carcinogen, probable carcinogen, and possible carcinogen," respectively, which are the terms advocated in the EPA's *Guidelines for Carcinogen Risk Assessment*, published in 1986 (51 FR 33992, September 24, 1986). In August 2000, the document, *Supplemental Guidance for Conducting Health Risk Assessment of Chemical Mixtures* (EPA/630/R-00/002), was published as a supplement to the 1986 document. Copies of both documents can be obtained from <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20533&CFID=70315376&CFTOKEN=71597944>. Summing the risk of these individual compounds to obtain the cumulative cancer risk is an approach that was recommended by the EPA's SAB in their 2002 peer review of the EPA's National Air Toxics Assessment (NATA) titled *NATA - Evaluating the National-scale Air Toxics Assessment 1996 Data -- an SAB Advisory*, available at [https://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/\\$File/ecadv02001.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf).

sum the HQ for each of the HAP that affects a common target organ or target organ system to obtain a TOSHI. The HQ is the estimated exposure divided by the chronic noncancer dose-response value, which is a value selected from one of several sources. The preferred chronic noncancer dose-response value is the EPA RfC, defined as “an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime”

([https://iaspub.epa.gov/sor\\_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary](https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary)). In cases where an RfC from the EPA’s IRIS is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic noncancer dose-response value can be a value from the following prioritized sources, which define their dose-response values similarly to the EPA: (1) the Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (<https://www.atsdr.cdc.gov/mrls/index.asp>); (2) the CalEPA Chronic Reference Exposure Level (REL) (<https://oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>); or (3) as noted above, a scientifically credible dose-response value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA. The pollutant-specific dose-response values used to estimate health risks are available at <https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants>.

*c. Risk from Acute Exposure to HAP that May Cause Health Effects Other Than Cancer*

For each HAP for which appropriate acute inhalation dose-response values are available, the EPA also assesses the potential health risks due to acute exposure. For these assessments, the

EPA makes conservative assumptions about emission rates, meteorology, and exposure location. In this proposed rulemaking, as part of our efforts to continually improve our methodologies to evaluate the risks that HAP emitted from categories of industrial sources pose to human health and the environment,<sup>9</sup> we are revising our treatment of meteorological data to use reasonable worst-case air dispersion conditions in our acute risk screening assessments instead of worst-case air dispersion conditions. This revised treatment of meteorological data and the supporting rationale are described in more detail in *Residual Risk Assessment for Miscellaneous Coating Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment*. We will be applying this revision in RTR rulemakings proposed on or after June 3, 2019.

To assess the potential acute risk to the maximally exposed individual, we use the peak hourly emission rate for each emission point,<sup>10</sup> reasonable worst-case air dispersion conditions (*i.e.*, 99<sup>th</sup> percentile), and the point of highest off-site exposure. Specifically, we assume that peak emissions from the source category and reasonable worst-case air dispersion (*i.e.*, 99<sup>th</sup> percentile) conditions co-occur and that a person is present at the point of maximum exposure.

To characterize the potential health risks associated with estimated acute inhalation exposures to a HAP, we generally use multiple acute dose-response values, including acute

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<sup>9</sup> See, *e.g.*, U.S. EPA. *Screening Methodologies to Support Risk and Technology Reviews (RTR): A Case Study Analysis* (Draft Report, May 2017. <https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html>).

<sup>10</sup> In the absence of hourly emission data, we develop estimates of maximum hourly emission rates by multiplying the average actual annual emission rates by a factor (either a category-specific factor or a default factor of 10) to account for variability. This is documented in *Residual Risk Assessment for Miscellaneous Coating Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment*. Both are available in the docket for this rulemaking.

RELS, acute exposure guideline levels (AEGs), and emergency response planning guidelines (ERPG) for 1-hour exposure durations, if available, to calculate acute HQs. The acute HQ is calculated by dividing the estimated acute exposure concentration by the acute dose-response value. For each HAP for which acute dose-response values are available, the EPA calculates acute HQs.

An acute REL is defined as “the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.”<sup>11</sup> Acute RELs are based on the most sensitive, relevant, adverse health effect reported in the peer-reviewed medical and toxicological literature. They are designed to protect the most sensitive individuals in the population through the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact. AEGs represent threshold exposure limits for the general public and are applicable to emergency exposures ranging from 10 minutes to 8 hours.<sup>12</sup> They are guideline levels for “once-in-a-lifetime, short-term exposures to airborne concentrations of acutely toxic, high-priority chemicals.” *Id.* at 21. The AEG-1 is specifically defined as “the airborne concentration (expressed as ppm (parts per million) or mg/m<sup>3</sup> (milligrams per cubic meter)) of a substance

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<sup>11</sup> CalEPA issues acute RELs as part of its Air Toxics Hot Spots Program, and the 1-hour and 8-hour values are documented in *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants*, which is available at <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>.

<sup>12</sup> National Academy of Sciences, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals*, page 2. Available at [https://www.epa.gov/sites/production/files/2015-09/documents/sop\\_final\\_standing\\_operating\\_procedures\\_2001.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf). Note that the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances ended in October 2011, but the AEG program continues to operate at the EPA and works with the National Academies to publish final AEGs (<https://www.epa.gov/aegl>).

above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.” The document also notes that “Airborne concentrations below AEGL-1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste, and sensory irritation or certain asymptomatic, nonsensory effects.” *Id.* AEGL-2 are defined as “the airborne concentration (expressed as parts per million or milligrams per cubic meter) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.” *Id.*

ERPGs are “developed for emergency planning and are intended as health-based guideline concentrations for single exposures to chemicals.”<sup>13</sup> *Id.* at 1. The ERPG-1 is defined as “the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined, objectionable odor.” *Id.* at 2. Similarly, the ERPG-2 is defined as “the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual’s ability to take protective action.” *Id.* at 1.

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<sup>13</sup> *ERPGS Procedures and Responsibilities*. March 2014. American Industrial Hygiene Association. Available at: <https://www.aiha.org/get-involved/AIHAGuidelineFoundation/EmergencyResponsePlanningGuidelines/Documents/ERPG%20Committee%20Standard%20Operating%20Procedures%20%20-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf>.

An acute REL for 1-hour exposure durations is typically lower than its corresponding AEGL-1 and ERPG-1. Even though their definitions are slightly different, AEGL-1s are often the same as the corresponding ERPG-1s, and AEGL-2s are often equal to ERPG-2s. The maximum HQs from our acute inhalation screening risk assessment typically result when we use the acute REL for a HAP. In cases where the maximum acute HQ exceeds 1, we also report the HQ based on the next highest acute dose-response value (usually the AEGL-1 and/or the ERPG-1).

For this source category, we used the default acute emissions multiplier of 10 to conservatively estimate maximum hourly rates.

In our acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP for which acute HQs are less than or equal to 1, and no further analysis is performed for these HAP. In cases where an acute HQ from the screening step is greater than 1, we assess the site-specific data to ensure that the acute HQ is at an off-site location. For this source category, the data refinements employed consisted of determining the off-site acute risks for each facility that had an initial HQ greater than 1. These refinements are discussed more fully in the *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this source category.

#### 4. How do we conduct the multipathway exposure and risk screening assessment?

The EPA conducts a tiered screening assessment examining the potential for significant human health risks due to exposures via routes other than inhalation (*i.e.*, ingestion). We first determine whether any sources in the source category emit any HAP known to be persistent and bioaccumulative in the environment, as identified in the EPA's Air Toxics Risk Assessment

Library (see Volume 1, Appendix D, at <https://www.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library>).

For the MCM source category, we identified PB-HAP emissions of cadmium compounds, polycyclic organic matter (POM), arsenic compounds, mercury compounds, and lead compounds, so we proceeded to the next step of the evaluation. Except for lead, the human health risk screening assessment for PB-HAP consists of three progressive tiers. In a Tier 1 screening assessment, we determine whether the magnitude of the facility-specific emissions of the PB-HAP warrants further evaluation to characterize human health risk through ingestion exposure. To facilitate this step, we evaluate emissions against previously developed screening threshold emission rates for several PB-HAP that are based on a hypothetical upper-end screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure (TRIM.FaTE) model. The PB-HAP with screening threshold emission rates are arsenic compounds, cadmium compounds, chlorinated dibenzodioxins and furans, mercury compounds, and POM. Based on the EPA estimates of toxicity and bioaccumulation potential, these pollutants represent a conservative list for inclusion in multipathway risk assessments for RTR rules. (See Volume 1, Appendix D at [https://www.epa.gov/sites/production/files/2013-08/documents/volume\\_1\\_reflibrary.pdf](https://www.epa.gov/sites/production/files/2013-08/documents/volume_1_reflibrary.pdf).) In this assessment, we compare the facility-specific emission rates of these PB-HAP to the screening threshold emission rates for each PB-HAP to assess the potential for significant human health risks via the ingestion pathway. We call this application of the TRIM.FaTE model the Tier 1 screening assessment. The ratio of a facility's actual emission rate to the Tier 1 screening threshold emission rate is a "screening value."

We derive the Tier 1 screening threshold emission rates for these PB-HAP (other than lead compounds) to correspond to a maximum excess lifetime cancer risk of 1-in-1 million (*i.e.*, for arsenic compounds, polychlorinated dibenzodioxins and furans and POM) or, for HAP that cause noncancer health effects (*i.e.*, cadmium compounds and mercury compounds), a maximum HQ of 1. If the emission rate of any one PB-HAP or combination of carcinogenic PB-HAP in the Tier 1 screening assessment exceeds the Tier 1 screening threshold emission rate for any facility (*i.e.*, the screening value is greater than 1), we conduct a second screening assessment, which we call the Tier 2 screening assessment. The Tier 2 screening assessment separates the Tier 1 combine fisher and farmer exposure scenario into fisher, farmer, and gardener scenarios that retain upper-bound ingestion rates.

In the Tier 2 screening assessment, the location of each facility that exceeds a Tier 1 screening threshold emission rate is used to refine the assumptions associated with the Tier 1 fisher and farmer exposure scenarios at that facility. A key assumption in the Tier 1 screening assessment is that a lake and/or farm is located near the facility. As part of the Tier 2 screening assessment, we use a U.S. Geological Survey (USGS) database to identify actual waterbodies within 50 km of each facility and assume the fisher only consumes fish from lakes within that 50 km zone. We also examine the differences between local meteorology near the facility and the meteorology used in the Tier 1 screening assessment. We then adjust the previously-developed Tier 1 screening threshold emission rates for each PB-HAP for each facility based on an understanding of how exposure concentrations estimated for the screening scenario change with the use of local meteorology and USGS lakes database.

In the Tier 2 farmer scenario, we maintain an assumption that the farm is located within 0.5 km of the facility and that the farmer consumes meat, eggs, dairy, vegetables, and fruit

produced near the facility. We may further refine the Tier 2 screening analysis by assessing a gardener scenario to characterize a range of exposures, with the gardener scenario being more plausible in RTR evaluations. Under the gardener scenario, we assume the gardener consumes home-produced eggs, vegetables, and fruit products at the same ingestion rate as the farmer. The Tier 2 screen continues to rely on the high-end food intake assumptions that were applied in Tier 1 for local fish (adult female angler at 99<sup>th</sup> percentile fish consumption<sup>14</sup>) and locally grown or raised foods (90<sup>th</sup> percentile consumption of locally grown or raised foods for the farmer and gardener scenarios<sup>15</sup>). If PB-HAP emission rates do not result in a Tier 2 screening value greater than 1, we consider those PB-HAP emissions to pose risks below a level of concern. If the PB-HAP emission rates for a facility exceed the Tier 2 screening threshold emission rates, we may conduct a Tier 3 screening assessment.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, locating residential/garden locations for urban and/or rural settings, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of meteorology and plume rise on chemical fate and transport (a time-series analysis). If necessary, the EPA may further refine the screening assessment through a site-specific assessment.

In evaluating the potential multipathway risk from emissions of lead compounds, rather than developing a screening threshold emission rate, we compare maximum estimated chronic inhalation exposure concentrations to the level of the current National Ambient Air Quality

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<sup>14</sup> Burger, J. 2002. Daily consumption of wild fish and game: Exposures of high end recreationists. *International Journal of Environmental Health Research* 12:343–354.

<sup>15</sup> U.S. EPA. *Exposure Factors Handbook 2011 Edition (Final)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-09/052F, 2011.

Standard (NAAQS) for lead.<sup>16</sup> Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

For further information on the multipathway assessment approach, see the *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

5. How do we conduct the environmental risk screening assessment?

*a. Adverse Environmental Effect, Environmental HAP, and Ecological Benchmarks*

The EPA conducts a screening assessment to examine the potential for an adverse environmental effect as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines “adverse environmental effect” as “any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.”

The EPA focuses on eight HAP, which are referred to as “environmental HAP,” in its screening assessment: six PB-HAP and two acid gases. The PB-HAP included in the screening assessment are arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both

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<sup>16</sup> In doing so, the EPA notes that the legal standard for a primary NAAQS – that a standard is requisite to protect public health and provide an adequate margin of safety (CAA section 109(b)) – differs from the CAA section 112(f) standard (requiring, among other things, that the standard provide an “ample margin of safety to protect public health”). However, the primary lead NAAQS is a reasonable measure of determining risk acceptability (*i.e.*, the first step of the Benzene NESHAP analysis) since it is designed to protect the most susceptible group in the human population – children, including children living near major lead emitting sources. 73 FR 67002/3; 73 FR 67000/3; 73 FR 67005/1. In addition, applying the level of the primary lead NAAQS at the risk acceptability step is conservative, since that primary lead NAAQS reflects an adequate margin of safety.

inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are hydrochloric acid (HCl) and hydrogen fluoride (HF).

HAP that persist and bioaccumulate are of particular environmental concern because they accumulate in the soil, sediment, and water. The acid gases, HCl and HF, are included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, we evaluate the following four exposure media: terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish consumed by wildlife, and air. Within these four exposure media, we evaluate nine ecological assessment endpoints, which are defined by the ecological entity and its attributes. For PB-HAP (other than lead), both community-level and population-level endpoints are included. For acid gases, the ecological assessment evaluated is terrestrial plant communities.

An ecological benchmark represents a concentration of HAP that has been linked to a particular environmental effect level. For each environmental HAP, we identified the available ecological benchmarks for each assessment endpoint. We identified, where possible, ecological benchmarks at the following effect levels: probable effect levels, lowest-observed-adverse-effect level, and no-observed-adverse-effect level. In cases where multiple effect levels were available for a particular PB-HAP and assessment endpoint, we use all of the available effect levels to help us to determine whether ecological risks exist and, if so, whether the risks could be considered significant and widespread.

For further information on how the environmental risk screening assessment was conducted, including a discussion of the risk metrics used, how the environmental HAP were identified, and how the ecological benchmarks were selected, see Appendix 9 of the *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of*

*the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

*b. Environmental Risk Screening Methodology*

For the environmental risk screening assessment, the EPA first determined whether any facilities in the MCM source category emitted any of the environmental HAP. For the MCM source category, we identified emissions of the PB-HAP listed above, plus HCl. Because one or more of the environmental HAP evaluated are emitted by at least one facility in the source category, we proceeded to the second step of the evaluation.

*c. PB-HAP Methodology*

The environmental screening assessment includes six PB-HAP, arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. With the exception of lead, the environmental risk screening assessment for PB-HAP consists of three tiers. The first tier of the environmental risk screening assessment uses the same health-protective conceptual model that is used for the Tier 1 human health screening assessment. TRIM.FaTE model simulations were used to back-calculate Tier 1 screening threshold emission rates. The screening threshold emission rates represent the emission rate in tons of pollutant per year that results in media concentrations at the facility that equal the relevant ecological benchmark. To assess emissions from each facility in the category, the reported emission rate for each PB-HAP was compared to the Tier 1 screening threshold emission rate for that PB-HAP for each assessment endpoint and effect level. If emissions from a facility do not exceed the Tier 1 screening threshold emission rate, the facility “passes” the screening assessment, and, therefore, is not evaluated further under the screening approach. If

emissions from a facility exceed the Tier 1 screening threshold emission rate, we evaluate the facility further in Tier 2.

In Tier 2 of the environmental screening assessment, the screening threshold emission rates are adjusted to account for local meteorology and the actual location of lakes in the vicinity of facilities that did not pass the Tier 1 screening assessment. For soils, we evaluate the average soil concentration for all soil parcels within a 7.5-km radius for each facility and PB-HAP. For the water, sediment, and fish tissue concentrations, the highest value for each facility for each pollutant is used. If emission concentrations from a facility do not exceed the Tier 2 screening threshold emission rate, the facility “passes” the screening assessment and typically is not evaluated further. If emissions from a facility exceed the Tier 2 screening threshold emission rate, we evaluate the facility further in Tier 3.

As in the multipathway human health risk assessment, in Tier 3 of the environmental screening assessment, we examine the suitability of the lakes around the facilities to support life and remove those that are not suitable (*e.g.*, lakes that have been filled in or are industrial ponds), adjust emissions for plume-rise, and conduct hour-by-hour time-series assessments. If these Tier 3 adjustments to the screening threshold emission rates still indicate the potential for an adverse environmental effect (*i.e.*, facility emission rate exceeds the screening threshold emission rate), we may elect to conduct a more refined assessment using more site-specific information. If, after additional refinement, the facility emission rate still exceeds the screening threshold emission rate, the facility may have the potential to cause an adverse environmental effect.

To evaluate the potential for an adverse environmental effect from lead, we compared the average modeled air concentrations (from HEM-3) of lead around each facility in the source category to the level of the secondary NAAQS for lead. The secondary lead NAAQS is a

reasonable means of evaluating environmental risk because it is set to provide substantial protection against adverse welfare effects which can include “effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.”

*d. Acid Gas Environmental Risk Methodology*

The environmental screening assessment for acid gases evaluates the potential phytotoxicity and reduced productivity of plants due to chronic exposure to HF and HCl. The environmental risk screening methodology for acid gases is a single-tier screening assessment that compares modeled ambient air concentrations (from AERMOD) to the ecological benchmarks for each acid gas. To identify a potential adverse environmental effect (as defined in section 112(a)(7) of the CAA) from emissions of HF and HCl, we evaluate the following metrics: the size of the modeled area around each facility that exceeds the ecological benchmark for each acid gas, in acres and km<sup>2</sup>; the percentage of the modeled area around each facility that exceeds the ecological benchmark for each acid gas; and the area-weighted average screening value around each facility (calculated by dividing the area-weighted average concentration over the 50-km modeling domain by the ecological benchmark for each acid gas). For further information on the environmental screening assessment approach, see Appendix 9 of the *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

6. How do we conduct facility-wide assessments?

To put the source category risks in context, we typically examine the risks from the entire “facility,” where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, we examine the HAP emissions not only from the source category emission points of interest, but also emissions of HAP from all other emission sources at the facility for which we have data. For this source category, we conducted the facility-wide assessment using a dataset compiled from the 2014 NEI. The source category records of that NEI dataset were removed, evaluated, and updated as described in section II.C of this preamble: What data collection activities were conducted to support this action? Once a quality assured source category dataset was available, it was placed back with the remaining records from the NEI for that facility. The facility-wide file was then used to analyze risks due to the inhalation of HAP that are emitted “facility-wide” for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of the facility-wide risks that could be attributed to the source category addressed in this action. We also specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, available through the docket for this action, provides the methodology and results of the facility-wide analyses, including all facility-wide risks and the percentage of source category contribution to facility-wide risks.

7. How do we consider uncertainties in risk assessment?

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. Also included are those uncertainties specific to our acute screening assessments, multipathway screening assessments, and our environmental risk screening assessments. A more thorough discussion of these uncertainties is included in the *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action. If a multipathway site-specific assessment was performed for this source category, a full discussion of the uncertainties associated with that assessment can be found in Appendix 11 of that document, *Site-Specific Human Health Multipathway Residual Risk Assessment Report*.

*a. Uncertainties in the RTR Emissions Dataset*

Although the development of the RTR emissions dataset involved quality assurance/quality control processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the datasets are accurate, errors in emission estimates, and other factors. The emission estimates considered in this analysis generally are annual totals for certain years, and they do not reflect short-term fluctuations during the course of a year or variations from year to year. The estimates of peak hourly emission rates for the acute effects screening assessment were based on an emission adjustment factor applied to the average annual hourly

emission rates, which are intended to account for emission fluctuations due to normal facility operations.

*b. Uncertainties in Dispersion Modeling*

We recognize there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, we select some model options that have the potential to overestimate ambient air concentrations (*e.g.*, not including plume depletion or pollutant transformation). We select other model options that have the potential to underestimate ambient impacts (*e.g.*, not including building downwash). Other options that we select have the potential to either under- or overestimate ambient levels (*e.g.*, meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated by dispersion models, the approach we apply in the RTR assessments should yield unbiased estimates of ambient HAP concentrations. We also note that the selection of meteorology dataset location could have an impact on the risk estimates. As we continue to update and expand our library of meteorological station data used in our risk assessments, we expect to reduce this variability.

*c. Uncertainties in Inhalation Exposure Assessment*

Although every effort is made to identify all of the relevant facilities and emission points, as well as to develop accurate estimates of the annual emission rates for all relevant HAP, the uncertainties in our emission inventory likely dominate the uncertainties in the exposure assessment. Some uncertainties in our exposure assessment include human mobility, using the centroid of each census block, assuming lifetime exposure, and assuming only outdoor

exposures. For most of these factors, there is neither an under nor overestimate when looking at the maximum individual risk or the incidence, but the shape of the distribution of risks may be affected. With respect to outdoor exposures, actual exposures may not be as high if people spend time indoors, especially for very reactive pollutants or larger particles. For all factors, we reduce uncertainty when possible. For example, with respect to census-block centroids, we analyze large blocks using aerial imagery and adjust locations of the block centroids to better represent the population in the blocks. We also add additional receptor locations where the population of a block is not well represented by a single location.

*d. Uncertainties in Dose-Response Relationships*

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties are generally expressed quantitatively, and others are generally expressed in qualitative terms. We note, as a preface to this discussion, a point on dose-response uncertainty that is stated in the EPA's *2005 Guidelines for Carcinogen Risk Assessment*; namely, that "the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective" (the EPA's *2005 Guidelines for Carcinogen Risk Assessment*, page 1-7). This is the approach followed here as summarized in the next paragraphs.

Cancer UREs used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk.<sup>17</sup> That is, they represent a “plausible upper limit to the true value of a quantity” (although this is usually not a true statistical confidence limit). In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.<sup>18</sup> Chronic noncancer RfC and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. To derive dose-response values that are intended to be “without appreciable risk,” the methodology relies upon an uncertainty factor (UF) approach,<sup>19</sup> which considers uncertainty, variability, and gaps in the available data. The UFs are applied to derive dose-response values that are intended to protect against appreciable risk of deleterious effects.

Many of the UFs used to account for variability and uncertainty in the development of acute dose-response values are quite similar to those developed for chronic durations. Additional adjustments are often applied to account for uncertainty in extrapolation from observations at one exposure duration (*e.g.*, 4 hours) to derive an acute dose-response value at another exposure duration (*e.g.*, 1 hour). Not all acute dose-response values are developed for the same purpose, and care must be taken when interpreting the results of an acute assessment of human health effects relative to the dose-response value or values being exceeded. Where relevant to the

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<sup>17</sup> IRIS glossary ([https://ofmpub.epa.gov/sor\\_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary](https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary)).

<sup>18</sup> An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

<sup>19</sup> See *A Review of the Reference Dose and Reference Concentration Processes*, U.S. EPA, December 2002, and *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry*, U.S. EPA, 1994.

estimated exposures, the lack of acute dose-response values at different levels of severity should be factored into the risk characterization as potential uncertainties.

Uncertainty also exists in the selection of ecological benchmarks for the environmental risk screening assessment. We established a hierarchy of preferred benchmark sources to allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. We searched for benchmarks for three effect levels (*i.e.*, no-effects level, threshold-effect level, and probable effect level), but not all combinations of ecological assessment/environmental HAP had benchmarks for all three effect levels. Where multiple effect levels were available for a particular HAP and assessment endpoint, we used all of the available effect levels to help us determine whether risk exists and whether the risk could be considered significant and widespread.

Although we make every effort to identify appropriate human health effect dose-response values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by this source category are lacking dose-response assessments. Accordingly, these pollutants cannot be included in the quantitative risk assessment, which could result in quantitative estimates understating HAP risk. To help to alleviate this potential underestimate, where we conclude similarity with a HAP for which a dose-response value is available, we use that value as a surrogate for the assessment of the HAP for which no value is available. To the extent use of surrogates indicates appreciable risk, we may identify a need to increase priority for an IRIS assessment for that substance. We additionally note that, generally speaking, HAP of greatest concern due to environmental exposures and hazard are those for which dose-response assessments have been performed, reducing the likelihood of understating risk. Further, HAP not included in the quantitative assessment are assessed qualitatively and considered in the risk

characterization that informs the risk management decisions, including consideration of HAP reductions achieved by various control options.

For a group of compounds that are unspiciated (*e.g.*, glycol ethers), we conservatively use the most protective dose-response value of an individual compound in that group to estimate risk. Similarly, for an individual compound in a group (*e.g.*, ethylene glycol diethyl ether) that does not have a specified dose-response value, we also apply the most protective dose-response value from the other compounds in the group to estimate risk.

*e. Uncertainties in Acute Inhalation Screening Assessments*

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that the EPA conducts as part of the risk review under section 112 of the CAA. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emission rates, meteorology, and the presence of a person. In the acute screening assessment that we conduct under the RTR program, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions (*i.e.*, 99<sup>th</sup> percentile) co-occur. We then include the additional assumption that a person is located at this point at the same time. Together, these assumptions represent a reasonable worst-case exposure scenario. In most cases, it is unlikely that a person would be located at the point of maximum exposure during the time when peak emissions and reasonable worst-case air dispersion conditions occur simultaneously.

*f. Uncertainties in the Multipathway and Environmental Risk Screening Assessments*

For each source category, we generally rely on site-specific levels of PB-HAP or environmental HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary or whether it is necessary to perform an environmental

screening assessment. This determination is based on the results of a three-tiered screening assessment that relies on the outputs from models – TRIM.FaTE and AERMOD – that estimate environmental pollutant concentrations and human exposures for five PB-HAP (dioxins, POM, mercury, cadmium, and arsenic) and two acid gases (HF and hydrogen chloride). For lead, we use AERMOD to determine ambient air concentrations, which are then compared to the secondary NAAQS standard for lead. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.<sup>20</sup>

Model uncertainty concerns whether the model adequately represents the actual processes (*e.g.*, movement and accumulation) that might occur in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screening assessments are appropriate and state-of-the-art for the multipathway and environmental screening risk assessments conducted in support of RTR.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the assessment at hand. For Tier 1 of the multipathway and environmental screening assessments, we configured the models to avoid underestimating exposure and risk. This was accomplished by selecting upper-end values from nationally representative datasets for the more influential parameters in the environmental model, including selection and spatial

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<sup>20</sup> In the context of this discussion, the term “uncertainty” as it pertains to exposure and risk encompasses both *variability* in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as *uncertainty* in being able to accurately estimate the true result.

configuration of the area of interest, lake location and size, meteorology, surface water, soil characteristics, and structure of the aquatic food web. We also assume an ingestion exposure scenario and values for human exposure factors that represent reasonable maximum exposures.

In Tier 2 of the multipathway and environmental screening assessments, we refine the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values, and we identify the actual location of lakes near the facility rather than the default lake location that we apply in Tier 1. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, we decrease the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screening assessment. In Tier 3 of the screening assessments, we refine the model inputs again to account for hour-by-hour plume rise and the height of the mixing layer. We can also use those hour-by-hour meteorological data in a TRIM.FaTE run using the screening configuration corresponding to the lake location. These refinements produce a more accurate estimate of chemical concentrations in the media of interest, thereby reducing the uncertainty with those estimates. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for all three tiers.

For the environmental screening assessment for acid gases, we employ a single-tiered approach. We use the modeled air concentrations and compare those with ecological benchmarks.

For all tiers of the multipathway and environmental screening assessments, our approach to addressing model input uncertainty is generally cautious. We choose model inputs from the upper end of the range of possible values for the influential parameters used in the models, and

we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying high risks for adverse impacts.

Despite the uncertainties, when individual pollutants or facilities do not exceed screening threshold emission rates (*i.e.*, screen out), we are confident that the potential for adverse multipathway impacts on human health is very low. On the other hand, when individual pollutants or facilities do exceed screening threshold emission rates, it does not mean that impacts are significant, only that we cannot rule out that possibility and that a refined assessment for the site might be necessary to obtain a more accurate risk characterization for the source category.

The EPA evaluates the following HAP in the multipathway and/or environmental risk screening assessments, where applicable: arsenic, cadmium, dioxins/furans, lead, mercury (both inorganic and methyl mercury), POM, HCl, and HF. These HAP represent pollutants that can cause adverse impacts either through direct exposure to HAP in the air or through exposure to HAP that are deposited from the air onto soils and surface waters and then through the environment into the food web. These HAP represent those HAP for which we can conduct a meaningful multipathway or environmental screening risk assessment. For other HAP not included in our screening assessments, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, we may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond these that we are evaluating may have the potential to cause adverse effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

#### **IV. Analytical Results and Proposed Decisions**

A. What are the results of the risk assessment and analyses?

As described above, for the MCM source category, we conducted an inhalation risk assessment for all HAP emitted, a multipathway screening assessment on the PB-HAP emitted, and an environmental risk screening assessment on the PB-HAP and acid gases emitted. We present results of the risk assessment briefly below and in more detail in the document titled *Residual Risk Assessment for the Miscellaneous Coating Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this rulemaking.

1. Chronic Inhalation Risk Assessment Results

Table 2 of this preamble provides a summary of the results of the inhalation risk assessment for the source category.

**Table 2. MCM Inhalation Risk Assessment Results<sup>5</sup>**

<b>Number of Facilities<sup>1</sup></b>	<b>Maximum Individual Cancer Risk (in 1 million)<sup>2</sup></b>	<b>Population at Increased Risk of Cancer <math>\geq</math> 1-in-1 Million</b>	<b>Annual Cancer Incidence (cases per year)</b>	<b>Maximum Chronic Noncancer TOSHI<sup>3</sup></b>	<b>Maximum Screening Acute Noncancer HQ<sup>4</sup></b>
43	6	3,700	0.002	0.4	2

<sup>1</sup> Number of facilities evaluated in the risk analysis.

<sup>2</sup> Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.

<sup>3</sup> Maximum TOSHI. The target organ system with the highest TOSHI for the source category is respiratory.

<sup>4</sup> The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which in most cases is the REL. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value. The HQ shown here is for glycol ethers, for which there are no other available acute dose-response values.

<sup>5</sup> For this source category, it was determined that baseline allowable emissions are equal to baseline actual emissions and, therefore, the risk summaries are the same.

The results of the inhalation risk modeling for both actuals and allowables, as shown in Table 2 of this preamble, indicate the estimated cancer MIR is 6-in-1 million, with chromium (VI) compounds from process vents as the major contributor to the risk. The total estimated cancer incidence from this source category is 0.002 excess cancer cases per year, or one excess

case in every 500 years. Approximately 3,700 people are estimated to have cancer risks greater than or equal to 1-in-1 million from HAP emitted from the facilities in this source category. The estimated maximum chronic noncancer TOSHI for the source category is 0.4 (respiratory), driven by emissions of acrylic acid from process vents. No one is exposed to TOSHI levels greater than 1.

## 2. Screening-Level Acute Risk Assessment Results

As shown in Table 2 above, the highest acute HQ based on the reasonable worst-case scenario is 2, based on the REL for glycol ethers. This is the highest HQ that is outside facility boundaries. One facility is estimated to have an HQ greater than 1 based on the REL, which is the only available benchmark for glycol ethers. Acute risk estimates for each facility and pollutant are provided in the risk assessment document, which is available in the docket for this rulemaking.

## 3. Multipathway Risk Screening Results

Potential multipathway health risks under a fisher and farmer/gardener scenario were identified using a three-tier screening assessment of the PB-HAP emitted by facilities in this source category. For carcinogenic PB-HAP, one facility emits arsenic compounds, while two facilities emit POM. None of these emissions exceed a Tier 1 cancer screening value for arsenic or POM. For noncarcinogenic PB-HAP, one facility emits cadmium compounds and one facility emits mercury compounds. None of these emissions exceed a Tier 1 noncancer screening value for cadmium or mercury. Further analyses (*i.e.*, Tier 2 or 3 screens) were not performed. For lead compounds, we did not estimate any exceedances of the lead NAAQS.

## 4. Environmental Risk Screening Results

A screening-level evaluation of the potential adverse environmental risk associated with emissions of the PB-HAP listed above, plus acid gases (HCl is the only reported acid gas), indicated that no ecological benchmarks were exceeded. For lead compounds, we did not estimate any exceedances of the secondary lead NAAQS.

## 5. Facility-Wide Risk Results

The results of the inhalation risk modeling using facility-wide emissions data indicate that the estimated MIR is 20-in-1 million with emissions of hydrazine from sources subject to other standards driving the risk. These include 40 CFR part 63 subpart FFFF (Miscellaneous Organic Chemicals Manufacturing NESHAP), H (Hazardous Organic NESHAP), and EEEE (Organic Liquids Distribution), which are not part of this source category. The total estimated cancer incidence is 0.006 excess cancer cases per year. Approximately 50,100 people are estimated to have cancer risks greater than or equal to 1-in-1 million. The estimated maximum chronic noncancer TOSHI is 2 (for the neurological target organ), driven by emissions of hydrogen cyanide from non-source category emissions from carbon fiber production. Approximately 80 people are estimated to be exposed to noncancer HI levels greater than 1.

## 6. What demographic groups might benefit from this regulation?

To examine the potential for any environmental justice issues that might be associated with the source category, we performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, we evaluated the distribution of HAP-related cancer and noncancer risk from the MCM source category across different demographic groups within the populations living near facilities.

The results of the demographic analysis are summarized in Table 3 of this preamble.

These results, for various demographic groups, are based on the estimated risk from actual emissions levels for the population living within 50 km of the facilities.

**Table 3. MCM Demographic Risk Analysis Results**

	Nationwide	Population with Cancer Risk at or Above 1-in-1 Million Due to MCM	Population with Chronic HI Above 1 Due to MCM
Total Population	371,746,049	3,665	0
White and Minority by Percent			
White	62	64	0
Minority	38	36	0
Minority by Percent			
African American	12	32	0
Native American	0.8	0.05	0
Hispanic or Latino (includes White and nonwhite)	18	2	0
Other and Multiracial	7	2	0
Income by Percent			
Below Poverty Level	14	29	0
Above Poverty Level	86	71	0
Education by Percent			
Over 25 and without High School Diploma	14	19	0
Over 25 and with a High School Diploma	86	81	0
Linguistically Isolated by Percent			
Linguistically Isolated	6	1	0

The results of the MCM source category demographic analysis indicate that emissions from the source category expose approximately 3,700 people to a cancer risk at or above 1-in-1 million and zero people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk

population in each demographic group (except for African American, Below Poverty Level, Hispanic or Latino, and Above Poverty Level) are similar to (within 5 percent of) their respective nationwide percentages. The African American and Below Poverty Level demographic groups are greater than their respective nationwide percentages, while the Hispanic or Latino (includes White and nonwhite) and Above Poverty Level are lower than their respective nationwide percentages.

The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Miscellaneous Coating Manufacturing Facilities*, available in the docket for this action.

*B. What are our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effect?*

#### 1. Risk Acceptability

As noted in section II.A of this preamble, the EPA sets standards under CAA section 112(f)(2) using a “two-step standard-setting approach, with an analytical first step to determine an ‘acceptable risk’ that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on MIR of approximately 1-in-10 thousand.” (54 FR 38045, September 14, 1989.) In this proposal, the EPA estimated risks based on actual and allowable emissions from MCM sources, and we considered these in determining acceptability. The estimated inhalation cancer risk to the individual most exposed to actual emissions from the source category is 6-in-1 million. The estimated cancer incidence due to inhalation exposures is 0.002 excess cancer cases per year, or one excess case every 500 years. Approximately 3,700 people face an increased cancer risk greater than 1-in-1 million due to inhalation exposures to HAP emissions from this source category. The estimated maximum chronic noncancer TOSHI

from inhalation exposure for this source category is 0.4. Risks for allowable emissions are the same since it was determined that allowable emissions are equal to actual emissions for this source category. The screening assessment of worst-case acute inhalation impacts indicates one facility with an estimated HQ of 2, based on the REL for glycol ethers.

Potential multipathway human health risks were estimated using a three-tier screening assessment of the PB-HAP emitted by facilities in this source category, where there were no exceedances of Tier 1 screening values for any PB-HAP emitted and, for lead compounds, no exceedances of the lead NAAQS.

In determining whether risks are acceptable for this source category, the EPA considered all available health information and risk estimation uncertainty as described above. The risk results indicate that the inhalation cancer risks to the individual most exposed are far less than 100-in-1 million, which is the presumptive limit of acceptability (see, for example, 54 FR 38045, September 14, 1989). There are no facilities or people exposed at this risk level for either actual or allowable emissions. Also, there are no facilities with an estimated maximum chronic noncancer TOSHI greater than 1. There is one facility with an acute HQ value of 2 based on the REL for glycol ethers; however, given the conservative nature of the acute screening assessment, it is unlikely there are acute impacts from HAP emissions from this category. In addition, there are no exceedances of Tier 1 screening values in the multipathway assessment, nor exceedances of the lead NAAQS. Considering all of the health risk information and factors discussed above, including the uncertainties discussed in section III of this preamble, the EPA proposes that the risks from the MCM source category are acceptable.

## 2. Ample Margin of Safety Analysis

We next considered whether the existing MACT standards provide an ample margin of safety to protect public health. In addition to considering all the health risks and other health information considered in the risk acceptability determination, in the ample margin of safety analysis we evaluated the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied to the source category to further reduce the risks due to emissions of HAP. As noted in our discussion of the technology review in section IV.C of this preamble, we identified two developments in practices, processes, or control technologies for reducing HAP emissions from process vessels in the MCM source category. As part of the risk review, we evaluated these developments to determine whether they could reduce risks and whether it is necessary to require these developments to provide an ample margin of safety to protect public health.

Since the baseline risks are being driven by inorganic HAP from process vessels, we evaluated a control option for inorganic HAP emissions from process vessels located at MCM facilities and considered the resulting health information. The control option that we evaluated for inorganic HAP would be similar to those included in 40 CFR part 63, subpart CCCCCC, the NESHAP for Area Sources for Paints and Allied Products Manufacturing. Additionally, we evaluated increasing the control efficiency requirements for organic HAP emissions from process vessels. The process vessel options did not result in a decrease to the MIR or to the maximum chronic noncancer TOSHI because the MIR facility already had controls in place. However, there was a reduction seen in the population exposed to a cancer risk of 1-in-1 million from 3,700 to 1,900 due to emissions reductions at other facilities. As described in section IV.C of this preamble though, we determined that these options are not cost effective. Overall, the

available options could result in small reductions in population risk, but we did not identify any cost-effective options for reducing HAP emissions from the source category.

Considering all of the health information presented above, along with the available information regarding the cost of the available options, we propose that the existing standards provide an ample margin of safety to protect public health. We are requesting comment on whether there are other control measures for emission sources in this category that are necessary to provide an ample margin of safety to protect public health. In particular, we are requesting that states identify any controls they have already required for these facilities, controls they are currently considering, or any other controls of which they are aware that are being used to control HAP from these sources.

#### 4. Adverse Environmental Effect

Based on the results of the environmental risk screening assessment, we are proposing that HAP emissions from the MCM source category do not present an adverse environmental effect. Thus, we are proposing that it is not necessary to set a more stringent standard to prevent, taking into consideration costs, safety, and other relevant factors, an adverse environmental effect.

#### *C. What are the results and proposed decisions based on our technology review?*

Sources of HAP emissions regulated by the MCM NESHAP are process vessels, storage tanks, transfer racks, equipment leaks, wastewater streams, and heat exchange systems. MCM processes occur as batch operations, which involve intermittent or discontinuous feed of raw materials into equipment, and generally involve emptying of the equipment after the operation ceases and prior to beginning a new operation. To inform our technology reviews for these emission sources, we reviewed the EPA's RBLC and regulatory development efforts for similar

sources published after the MCM NESHAP was developed. We then evaluated the impacts of requiring additional controls identified in the technology review for the MCM source category, as described below.

## 1. Process Vessels

Process vessels regulated by the MCM NESHAP are defined as any stationary or portable tank or other vessel with a capacity greater than or equal to 250 gal and in which mixing, blending, diluting, dissolving, temporary holding, and other processing steps occur in the manufacturing of a coating. Process vessels used in MCM generate gaseous streams containing HAP when HAP-containing materials are present in the vessel and more material is added displacing solvent-laden air from inside the vessel, and during product mixing as the HAP-containing contents are agitated.

At existing sources, the HAP emissions from portable vessels must be controlled by fitting the vessels with lids that are kept closed at all times when the vessel contains a HAP, except for material additions and sampling. The HAP emissions from stationary vessels must be controlled by fitting the vessels with lids that are kept closed at all times when the vessel contains a HAP, except for material additions and sampling, and by capturing all emissions and routing the captured emissions to a control device. Organic HAP with a vapor pressure equal to or greater than 0.6 kilopascals (kPa) must be reduced by at least 75 percent by weight, and organic HAP with a vapor pressure less than 0.6 kPa must be reduced by at least 60 percent.

At new sources, the HAP emissions from portable and stationary process vessels must be controlled by fitting the vessels with lids that are kept closed at all times when the vessel contains a HAP, except for material additions and sampling. The emissions from both portable and stationary process vessels must be captured and the captured emissions reduced by at least

95 percent, as total organic HAP, using a control device other than a flare, reduced by venting non-halogenated vent streams to a flare, or vented to a condenser. If a condenser is used, the condenser must achieve a specified outlet gas temperature depending on the partial pressure of the HAP contained in the vessel. If a combustion device is used to control a halogenated vent stream, then a halogen reduction device (*e.g.*, a scrubber) must be used to reduce hydrogen halide and halogen HAP by at least 95 percent; or reduce overall emissions of hydrogen halide and halogen HAP to no more than 0.45 kg/hr.

We evaluated two options that could be potentially considered technology developments under CAA section 112(d)(6). In the first option, we considered increasing the control efficiency requirement for process vessels at existing sources to match the control requirement for new sources, which would increase the control efficiency for organic HAP with a vapor pressure equal to or greater than 0.6 kPa from 75 percent to 95 percent. We consider this option to be a new development because several facilities have controlled all process vessels with thermal oxidizers to comply with the NESHAP.

We estimated the costs of installing a thermal oxidizer on the six plants in the MCM source category that currently do not have a thermal oxidizer installed on process vessels. We did not estimate costs for catalytic oxidizers because thermal oxidizers are cheaper than catalytic oxidizers. The costs were estimated using the *EPA Air Pollution Control Cost Manual* cost spreadsheet for thermal oxidizers<sup>21</sup> and the process vent flow rate from NEI or the facility operating permit. The estimated cost effectiveness for these facilities ranged from \$20,000 per ton HAP removed to \$150,000 per ton HAP removed.

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<sup>21</sup> <https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution>.

The second option that we considered was to require controls to limit particulate matter (PM) HAP emissions from process vessels in which dry materials (*e.g.*, pigments) containing inorganic HAP are added to the process vessel. We considered provisions that would be similar to those included in 40 CFR part 63, subpart CCCCCC, the NESHAP for Area Sources for Paints and Allied Products Manufacturing. This option would reflect the fact that several facilities subject to 40 CFR part 63, subpart HHHHH have process vessels controlled with fabric filters when dry materials are being added.

We estimated costs for both a fabric filter baghouse and a cartridge filter type of particulate control with a flow rate of 1,000 cubic feet per minute, plus 150 feet of flexible duct to capture the fugitive PM when dry matter is being added to the mixing vessel. The estimated cost effectiveness for this option ranged from \$310,000 to \$2,100,000 per ton of particulate HAP reduced. We also evaluated whether pigments could be added in a wetted or paste form, but not all pigments are available or can be used in wetted or paste form.

The EPA did not find the control technology development options considered for process vessels in this technology review to be cost effective, or, in some cases, technologically feasible. Consequently, the EPA proposes that it is not necessary to amend the standards for process vessels under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum, *Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

## 2. Storage Tanks

Storage tanks hold the liquid raw materials used in the coating manufacturing process. Emissions occur from storage tanks through the displacement of vapor-laden air as the tank is

being filled (working losses) and also due to changes in temperature that cause the vapor-laden air in the head space of the tank to expand (breathing losses).

Emissions from vertical tanks can be controlled by installing a floating roof inside the tank. By floating on the surface of the liquid, this roof design eliminates head space above the surface of the liquid and, therefore, minimizes the evaporation of organic vapors inside the tank. An internal floating roof (IFR) tank has a second fixed roof over the floating roof. An external floating roof (EFR) tank has no fixed roof over the floating roof and is exposed to the elements.

Emissions from horizontal tanks can be controlled with a closed vent system that captures the emissions and delivers them to either a recovery device or a destruction device. Control devices within the MCM source category include carbon adsorbers and combustion devices. Alternatively, a vapor balancing system can be used to eliminate working loss emissions. In vapor balancing, the displaced vapors from the receiving tank are piped back into the storage vessel from which the liquid product is delivered.

No facility in the MCM source category during the original MACT development reported using IFRs, EFRs, or vapor balancing to reduce HAP emissions from any storage tank.

The MCM NESHAP regulates two classes of storage tanks. Group 1a storage tanks are storage tanks at existing sources with capacities greater than or equal to 20,000 gal storing material that has a maximum true vapor pressure of total organic HAP greater than or equal to 1.9 psia. Group 1a storage tanks also include storage tanks at new sources with capacities greater than or equal to 25,000 gal storing materials with a maximum true vapor pressure of total HAP greater than or equal to 0.1 psia, as well as storage tanks with capacities greater than or equal to 20,000 gal and less than 25,000 gal storing materials with a maximum true vapor pressure of total HAP greater than or equal to 1.5 psia.

Group 1b storage tanks are storage tanks at new sources with capacities greater than or equal to 10,000 gal, storing materials that have a maximum true vapor pressure of total organic HAP greater than or equal to 0.02 psia, and are not Group 1a storage tanks.

Emissions from Group 1a storage tanks must be controlled by complying with the provisions of 40 CFR part 63, subpart WW (NESHAP for Storage Vessels (Tanks) – Control Level 2), which is based on the use of an IFR or an EFR; by reducing total organic HAP emissions by at least 90 percent by weight by venting emissions through a closed-vent system to a control device (excluding a flare); or by reducing total organic HAP emissions from the storage tank by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare.

The EPA did not identify in our technology review any developments in practices, processes, and control technologies for storage tanks that were not already considered in the development of the original MACT. Because there were no improvements in the technologies considered under MACT, the EPA proposes that it is not necessary to amend the standards for storage tanks under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum, *Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

### 3. Transfer Operations

Transfer operations involve the bulk loading of coating products into either tanker trucks or tanker rail cars. Transfer operations do not involve the filling of cans, pails, drums, or totes. Most coating manufacturing facilities perform only the filling of cans, pails, drums, or totes with coating products and do not perform transfer operations to tanker trucks or rail cars. A few

coating manufacturers perform transfer operations because they provide coatings to facilities, such as coil coating and metal can coating facilities, that use large quantities of certain coatings and store those coatings in large stationary storage tanks.

Emissions during transfer operations are generated by the displacement of the solvent vapor-laden air in the receiving tanker truck or rail car as the tank is filled. The extent of the HAP emissions will depend on the HAP content of the material being loaded (*i.e.*, weight percent HAP), the volatility of the HAP in the material being loaded, and the total volume of coating being loaded. The MCM NESHAP regulates the bulk loading of coating products if the coatings contain 3.0 million gal or more per year of HAP with a weighted average HAP partial pressure greater than or equal to 1.5 psia. The MCM NESHAP requires the HAP emissions to be controlled by either venting the emissions through a closed-vent system to any combination of control devices (except a flare) and reducing emissions by at least 75 percent, by venting the emissions from a non-halogenated vent stream through a closed-vent system to a flare, or by using a vapor balancing system to collect displaced organic HAP vapors and route the vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.

The EPA did not identify in our technology review any developments in practices, processes, and control technologies for bulk loading of coating products that were not already considered in the development of the original MACT. Because there were no improvements in the technologies considered under MACT, the EPA proposes that it is not necessary to amend the standards for transfer operations under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum,

*Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

#### 4. Equipment Leaks

In the MCM source category, organic HAP vapors can escape from leaks in connectors, valves, and pumps in liquid piping systems due to mechanical defects in those items. MCM facilities use piping systems to move liquid raw materials from storage tanks to process vessels and then from process vessels to filling operations or bulk transfer operations.

Emissions can be minimized through periodic monitoring of the connectors, valves, and pumps to check for leaks and the timely repair of equipment that is found to be leaking. Leak detection can be through sensory monitoring using sight, sound, and smell to detect leaks, or leak detection can be through the use of a monitoring instrument (EPA Method 21) that measures the concentration of organic vapors in parts per million by volume (ppmv) in the air near each of the connectors, valves, and pumps. Different NESHAP that specify the use of instrument monitoring may define a different threshold vapor concentration that constitutes a leak that triggers the need for repair.

The MCM NESHAP requires existing sources to comply with the equipment leaks provisions in 40 CFR part 63, subpart R, NESHAP for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations); subpart TT, NESHAP for Equipment Leaks, Control Level 1; or subpart UU, NESHAP for Equipment Leaks, Control Level 2. New sources must comply with the provisions of subparts UU or TT. Subpart R requires monthly inspections for equipment leaks using sight, sound, or smell. Subpart TT requires the use of instrument monitoring and defines leaks as instrument readings of 10,000 ppmv for valves, pumps, and connectors. Subpart UU also requires the use of instrument monitoring and defines

leaks as instrument readings of 500 ppmv for valves, 1,000 ppmv for pumps, and 500 ppmv for connectors.

Based on developments in other similar source categories, we identified as a technology alternative to the current standard a more stringent provision for existing sources that would eliminate sensory monitoring and require instrument monitoring with lower leak definitions than specified in 40 CFR part 63, subpart TT. For this alternative, we estimated the incremental emission reductions and cost effectiveness of employing instrument monitoring (EPA Method 21) with an equipment leak defined as instrument readings of 500 ppmv for valves, 2,000 ppmv for pumps, and 500 ppmv for connectors. We estimated the costs of requiring instrument monitoring with more stringent leak definitions for four model plants with 25, 50, 100, or 200 process vessels. The estimated cost effectiveness for these model plants ranged from \$107,000 per ton HAP removed to \$22,000 per ton HAP removed for the smallest to largest model plant, and these values are higher than organic HAP cost-effectiveness values that we historically have considered cost effective.

The EPA does not find the leak detection instrument monitoring option that was evaluated to be cost effective. Consequently, the EPA proposes that it is not necessary to amend the standards for equipment leaks under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum, *Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

## 5. Wastewater Streams

Wastewater that comes in contact with organic HAP-containing materials may be a source of organic HAP emissions as the organic HAP evaporates from the wastewater. In

coatings manufacturing, wastewater containing organic HAP may be generated from the cleaning of process vessels and other equipment between batches of different coatings.

Emissions can be controlled from wastewater by collecting and moving the wastewater in enclosed pipes and then treating the wastewater to remove the organic HAP. Wastewater containing organic HAP can be collected and treated as hazardous waste in which case it is usually incinerated. It can also be treated by using steam to volatilize the organic HAP and separate it from the wastewater. Finally, if the organic HAP concentration is low enough, it can be treated through enhanced biological treatment in which microorganisms oxidize the organic HAP.

The MCM NESHAP regulates wastewater streams that contain total partially soluble and soluble HAP at an annual average concentration greater than or equal to 4,000 ppmw and load greater than or equal to 750 lb/yr at existing sources, or that contain greater than or equal to 1,600 ppmw and any partially soluble and soluble HAP load at new sources. Wastewater tanks used to store regulated wastewater streams must have a fixed roof, which may have openings necessary for proper venting of the tank, such as a pressure/vacuum vent or j-pipe vent. Regulated wastewater streams must be conveyed using hard piping and treated as a hazardous waste in accordance with 40 CFR part 264, 265, or 266 either onsite or offsite. Alternatively, if the wastewater contains less than 50 ppmw of partially soluble HAP, it may be treated in an enhanced biological treatment system that is located either onsite or offsite.

Because our technology review identified no developments in practices, processes, or controls for reducing wastewater emissions at MCM facilities, we evaluated developments in other industries with wastewater streams that contain organic HAP. We reviewed three options

that were considered in other industry technology reviews for their applicability to the MCM wastewater streams. These options were:

(1) Requiring wastewater drain and tank controls at facilities with a total annual benzene quantity of less than 10 megagrams per year (Mg/yr).

(2) Requiring specific performance parameters (minimum fraction biodegraded, fbio) for an enhanced biological unit beyond those required in the Benzene NESHAP.

(3) Requiring wastewater streams with a volatile organic compound (VOC) content of 750 ppmw or higher to be treated by steam stripping prior to any other treatment process for facilities with high organic loading rates (*i.e.*, facilities with total annualized benzene quantity of 10 Mg/yr or more).

The EPA did not find any of the three wastewater stream control options evaluated to be cost effective. Consequently, the EPA proposes that it is not necessary to amend the standards for wastewater streams under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum, *Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

## 6. Heat Exchange Systems

Heat exchangers are devices or collections of devices used to transfer heat from process fluids to another fluid (typically air or water) without intentional direct contact of the process fluid with the cooling fluid (*i.e.*, non-contact heat exchangers).

At times, the heat exchanger's internal tubing material can corrode or crack, allowing some process fluids to mix or become entrained with the cooling water. Pollutants in the process fluids may subsequently be released from the cooling water into the atmosphere when the water

is exposed to air (*e.g.*, in a cooling tower for closed-loop systems or at trenches/ponds in a once-through system).

The MCM NESHAP regulates heat exchangers by requiring them to meet the provisions in 40 CFR part 63, subpart F, NESHAP for the Synthetic Organic Chemical Manufacturing Industry. Specifically, under 40 CFR 63.104, facilities are required to monitor the cooling water in the heat exchange system on a periodic basis to detect and repair leaks, unless certain design and operating requirements are met. Those other requirements include operating the system such that the cooling water is at a higher pressure than the process fluid, using an intervening cooling fluid between the water and process fluid and ensuring the intervening fluid is not discharged, using a once-through heat exchange system that is subject to a NPDES permit, or only using the heat exchange system to cool process fluids that meet low-HAP content criteria.

The EPA did not identify in our technology review any developments in practices, processes, and control technologies for heat exchange systems that were not already considered in the development of the original MACT. Because there were no improvements in the technologies considered under MACT, the EPA proposes that it is not necessary to amend the standards for heat exchange systems under the technology review. Further explanation of the assumptions and methodologies for all options evaluated are provided in the memorandum, *Clean Air Act Section 112(d)(6) Technology Review for the Miscellaneous Coatings Manufacturing Source Category*, available in the docket to this action.

*D. What other actions are we proposing?*

In addition to the proposed decisions described above, we are proposing additional revisions to the NESHAP. We are proposing revisions to the SSM provisions of 40 CFR part 63, subpart HHHHH to be consistent with the Court decision in *Sierra Club v. EPA*, 551 F. 3d 1019

(D.C. Cir. 2008), which vacated rule provisions that exempt sources from the provision to comply with otherwise applicable NESHAP during periods of SSM. We also are proposing to require electronic submittal of notifications, semi-annual reports and compliance reports (which include performance test reports). We are proposing to require periodic performance testing of oxidizers used to demonstrate compliance. We are proposing technical and editorial revisions and corrections.

## 1. SSM Provisions

In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that some section 112 standards apply continuously.

We are proposing the elimination of the SSM exemption in this rule which appears at 40 CFR 63.8000(a). Consistent with *Sierra Club v. EPA*, we are proposing standards in this rule that apply at all times. We are also proposing several revisions to Table 10 (the General Provisions Applicability Table) as explained in more detail below. For example, we are proposing to eliminate the incorporation of the General Provisions' requirement that the source develop an SSM plan. We also are proposing to eliminate and revise certain recordkeeping and reporting requirements related to the SSM exemption as further described below.

The EPA has attempted to ensure that the provisions we are proposing to eliminate are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether we have successfully done so.

In addition, as explained in more detail in section IV.D.1.i., below, we are proposing language in 40 CFR 63.8005(h) to clarify that any periods during which a control device is bypassed be included in demonstrating compliance with the emission reduction provisions for process vessels in Table 1 to 40 CFR part 63, subpart HHHHH. As currently specified in 40 CFR 63.8005, 63.8010, and 63.8020, you must establish operating limits for process vessels and storage tanks controlled by closed vent systems and add-on controls, and for wastewater streams controlled by enhanced biological treatment units. This generally means that during startup and shutdown periods, in order for a facility using add-on controls to meet the emissions and operating standards, the add-on control device needs to be turned on and operating at specified levels when the facility begins coating manufacturing operations, and the control equipment needs to continue to be operated until the facility ceases coating manufacturing operations. In some cases, the facility would need to run thermal oxidizers on supplemental fuel whenever there is insufficient concentrations of VOC for the combustion to be self-sustaining. The proposed language in 40 CFR 63.8000(a) requires that the owner or operator operate and maintain the coating manufacturing operations, including pollution control equipment, at all times to minimize emissions, except as explained in more detail in section IV.D.1.i below, to account for bypass periods of the controls for process vessels as proposed in 40 CFR 63.8005(h).

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 63.2) (Definition of malfunction). The EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards and this reading has

been upheld as reasonable by the Court in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (D.C. Cir. 2016). Under CAA section 112, emissions standards for new sources must be no less stringent than the level “achieved” by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation “achieved” by the best performing 12 percent of sources in the category. There is nothing in CAA section 112 that directs the Agency to consider malfunctions in determining the level “achieved” by the best performing sources when setting emission standards. As the Court has recognized, the phrase “average emissions limitation achieved by the best performing 12 percent of” sources “says nothing about how the performance of the best units is to be calculated.” *Nat’l Ass’n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1141 (D.C. Cir. 2013). While the EPA accounts for variability in setting emissions standards, nothing in CAA section 112 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source.

As the Court recognized in *U.S. Sugar Corp.*, accounting for malfunctions in setting standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. *Id.* at 608 (“the EPA would have to conceive of a standard that could apply equally to the wide range of possible boiler malfunctions, ranging from an explosion to minor mechanical defects. Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.”) As such, the performance of units that are malfunctioning is not “reasonably” foreseeable. See, e.g., *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999)

("The EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to 'invest the resources to conduct the perfect study.'). See also, *Weyerhaeuser v Costle*, 590 F.2d 1011, 1058 (D.C. Cir. 1978) ("In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation."). In addition, emissions during a malfunction event can be significantly higher than emissions at any other time of source operation.

Although no statutory language compels the EPA to set standards for malfunctions, the EPA has the discretion to do so where feasible. For example, in the Petroleum Refinery Sector RTR, the EPA established a work practice standard for unique types of malfunctions that result in releases from PRDs or emergency flaring events because the EPA had information to determine that such work practices reflected the level of control that applies to the best performers. 80 FR 75178, 75211-14 (December 1, 2015). The EPA will consider whether circumstances warrant setting standards for a particular type of malfunction and, if so, whether the EPA has sufficient information to identify the relevant best performing sources and establish a standard for such malfunctions. In this proposal at 40 CFR 63.8005(h), we provide a method to account for control device bypass periods including periods of SSM, in evaluating compliance with the overall control efficiency requirements for process vessels in Table 1, as is discussed further. We encourage commenters to provide any such information. Finally, in the event that a

source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions.

The specific changes that we propose to comport the rule with the *Sierra Club* decision on SSM are listed in paragraphs a through i below:

*a. 40 CFR 63.8000 General Duty*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(1)(i) by changing the “yes” in column 3 to a “no.” Section 63.6(e)(1)(i) describes the general duty to minimize emissions. Some of the language in that section is no longer necessary or appropriate in light of the elimination of the SSM exemption. We are proposing instead to add general duty regulatory text at 40 CFR 63.8000(a) that reflects the general duty to minimize emissions while eliminating the reference to periods covered by an SSM exemption. The current language in 40 CFR 63.6(e)(1)(i) characterizes what the general duty entails during periods of SSM. With the elimination of the SSM exemption, there is no need to differentiate between normal operations, startup and shutdown, and malfunction events in describing the general duty. Therefore, the language the EPA is proposing for 40 CFR 63.8000(a) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(1)(ii) by changing the “yes” in column 3 to a “no.” Section 63.6(e)(1)(ii) imposes requirements that are not necessary with the elimination of the SSM exemption or are redundant with the general duty provision being added at 40 CFR 63.8000(a).

*b. SSM Plan*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(3) by consolidating the entries for subparagraphs (i) to (ix) under a single entry for 40 CFR 63.6(e)(3) and by changing the “yes” in column 3 to a “no.” Generally, these paragraphs require development of an SSM plan and specify SSM recordkeeping and reporting provisions related to the SSM plan. As noted, the EPA is proposing to remove the SSM exemptions. Therefore, affected units will be subject to an emission standard during such events. The applicability of a standard during such events will ensure that sources have ample incentive to plan for and achieve compliance and, thus, the SSM plan provisions are no longer necessary.

*c. Compliance with Standards*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(f)(1) by changing the “yes” in column 3 to a “no.” The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the Court in the *Sierra Club* decision vacated the exemptions contained in this provision and held that the CAA requires that some section 112 standards apply continuously. Consistent with *Sierra Club*, the EPA is proposing to revise standards in this rule to apply at all times.

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(h)(1) by changing the “yes” in column 3 to a “no.” The current language of 40 CFR 63.6(h)(1) exempts sources from opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club* vacated the exemptions contained in this provision and held that the CAA requires that some section 112 standard apply continuously. Consistent with the *Sierra Club* decision, the EPA is proposing to revise standards in this rule to apply at all times.

*d. 40 CFR 63.8005(d) Performance Testing*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.7(e)(1) by changing the “yes” in column 3 to a “no.” Section 63.7(e)(1) describes performance testing provisions. The EPA is instead proposing to add performance testing provisions at 40 CFR 63.8005(d)(5). The performance testing provisions we are proposing to add differ from the General Provisions performance testing provisions in several respects. The regulatory text does not include the language in 40 CFR 63.7(e)(1) that restated the SSM exemption and language that precluded startup and shutdown periods from being considered “representative” for purposes of performance testing. The proposed performance testing provisions will exclude periods of startup or shutdown as representative conditions for conducting performance testing. As in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. The EPA is proposing to add language that requires owners or operators to record the process information that is necessary to document operating conditions during tests and include in such record explanations to support that such conditions represent normal operation. Section 63.7(e) requires that owners or operators make available to the Administrator upon request such records “as may be necessary to determine the condition of the performance test,” but does not specifically require the information to be recorded. The regulatory text the EPA is proposing to add clarifies the necessary information and makes explicit the provision to record the information.

*e. Monitoring*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.8(c)(1)(i) and (iii) by changing the “yes” in column 3 to a “no” for both entries. The cross-references to the general duty and SSM plan provisions in those subparagraphs are not necessary

in light of other provisions of 40 CFR 63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the provisions of a quality control program for monitoring equipment (40 CFR 63.8(d)).

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.8(d) by creating a separate entry for 40 CFR 63.8(d)(3) and by indicating “no” in column 3. The final sentence in 40 CFR 63.8(d)(3) refers to the General Provisions’ SSM plan provision which is no longer applicable. We are proposing to add to the rule at 40 CFR 63.8000(d)(8) text that is identical to 40 CFR 63.8(d)(3) except that the final sentence is replaced with the following sentence: “The program of corrective action should be included in the plan required under § 63.8(d)(2).”

*f. 40 CFR 63.8080 Recordkeeping*

We are proposing to revise the General Provisions table (Table 10) entries for 40 CFR 63.10(b)(2) by creating a single row for 40 CFR 63.10(b)(2)(i) and (ii) and indicating a “no” in column 3. Section 63.10(b)(2)(i) describes the recordkeeping provisions during startup and shutdown. Section 63.10(b)(2)(ii) describes the recordkeeping provisions during a malfunction. These recordkeeping provisions are no longer necessary because we are proposing to remove the exemptions and other special provisions applicable to SSM periods so there is no reason to retain additional recordkeeping for these periods. We are also proposing to replace the references to 40 CFR 63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) in the former entry for 40 CFR 63.10(b)(2)(i) with a reference to a new paragraph 40 CFR 63.8080(h) that specifies recordkeeping in the event of any deviation from an emission limitation. The regulatory text we are proposing to add differs from the General Provisions it is replacing in that the General Provisions require the creation and retention of a record of the occurrence and duration of each

malfunction of process, air pollution control, and monitoring equipment. We are proposing that this provision apply to any failure to meet an applicable standard and is requiring that the source record the date, time, and duration of the failure rather than the “occurrence.” The EPA is also proposing to add to 40 CFR 63.8080(h) a provision that requires source owners or operators to keep records that include a list of the affected source or equipment and actions taken to minimize emissions, an estimate of the quantity of each regulated pollutant emitted over the standard for which the source failed to meet the standard, and a description of the method used to estimate the emissions. Examples of such estimation methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing to require that source owners or operators keep records of this information to ensure that there is adequate information to allow us to determine the severity of any failure to meet a standard, and to provide data that may document how the source met the general duty to minimize emissions when the source has failed to meet an applicable standard.

We are proposing to revise the General Provisions table (Table 10) entries for 40 CFR 63.10(b)(2) by creating a single row for 40 CFR 63.10(b)(2)(iv) and (v) and indicating a “no” in column 3. When applicable, 40 CFR 63.10(b)(2)(iv) requires source owners or operators to record actions taken during SSM events when actions were inconsistent with their SSM plans. The provision in 40 CFR 63.10(b)(2)(v) requires source owners or operators to record actions taken during SSM events to show that actions taken were consistent with their SSM plans. These provisions will no longer be appropriate because we propose that SSM plans will no longer be required. The provisions previously applicable under 40 CFR 63.10(b)(2)(iv) and (v) to record corrective actions is now applicable by reference to 40 CFR 63.8080(h).

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.10(c)(15) by changing the “yes” in column 3 to a “no.” The EPA is proposing that 40 CFR 63.10(c)(15) no longer applies. When applicable, the provision allows an owner or operator to use the affected source's SSM plan or records kept to satisfy the recordkeeping provisions of the SSM plan, specified in 40 CFR 63.6(e), to also satisfy the provisions of 40 CFR 63.10(c)(10) through (12). The EPA is proposing to eliminate this provision because SSM plans would no longer be required; therefore, 40 CFR 63.10(c)(15) would no longer serve any useful purpose for affected sources.

*g. 40 CFR 63.8075 Reporting*

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.10(d)(5)(i) by removing the reference to 40 CFR 63.8075(e)(5) and (6), but retaining the “no” entry. The provisions in 40 CFR 63.8075(e)(5) describe the reporting provisions for SSM in place of those at 40 CFR 63.10(d)(5)(i). To replace the SSM reporting provision, the EPA is proposing to add reporting provisions to 40 CFR 63.8075(e)(6). The replacement language differs from the General Provisions in that it eliminates periodic SSM reports as a stand-alone report. We are proposing language that requires source owners or operators that fail to meet an applicable standard at any time to report the information concerning such events in the semi-annual compliance report already required under this rule. We are proposing that the report must contain the number, date, time, duration, and the cause of such events (including unknown cause, if applicable), a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this provision to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source owner or operator met the general duty to minimize emissions during a failure to meet an applicable standard.

*h. Conforming Changes for Cross-References to Other Subparts*

We are proposing amendments to account for instances where 40 CFR part 63, subpart HHHHH cross-references other subparts that contain SSM provisions. Proposed 40 CFR 63.8000(f) lists the referenced provisions in subparts SS, TT, and UU of part 63 that contain references to SSM periods that will no longer apply after the compliance date for the proposed amendments. Proposed 40 CFR 63.8000(f)(10) through (f)(22) lists the paragraphs or phrases within the paragraphs that will not apply after the applicable compliance dates for the proposed amendments because they are no longer applicable as a result of the proposed SSM revisions.

*i. Provisions to Account for Control Device Bypass Periods in Determining Compliance*

Because we are proposing to remove the SSM provisions and require compliance at all times, we are proposing to amend 40 CFR 63.8000(c) to account for bypass periods in determining compliance with the emission percent reduction provisions in Table 1 to 40 CFR part 63, subpart HHHHH for process vessels. These amendments will apply to process vessels with closed vent systems and add-on controls that contain bypass lines that could divert a vent stream to the atmosphere. We are proposing that owners and operators must measure and record during each semiannual compliance period the hours that the control device was bypassed and the source's total operating hours. They must then use the overall control efficiency required in

Table 1, the total operating hours, and the control efficiency of the control device to determine the allowable bypass hours during the semiannual compliance period using proposed Equation 1 in 40 CFR 63.8005(h). These changes are required because SSM periods that may involve bypassing of the control device cannot be excluded and must now be included in determining compliance.

*j. Safety Devices*

Because we are proposing to remove the SSM provisions and require compliance at all times, we are proposing to revise 40 CFR 63.8000(b)(2), which allows the opening of a safety device at any time conditions require it to avoid unsafe conditions. We are proposing to revise 40 CFR 63.8000(b)(2) so that opening of a safety device to avoid unsafe conditions is considered a deviation, unless it is a bypass of a control for a process vessel and accounted for as specified in 40 CFR 63.8005(h). We are also proposing to revise 40 CFR 63.8080(c), which is the provision to keep a record of each time a safety device is opened, to add additional recordkeeping provisions consistent with those for other deviations. As a result of these proposed changes, the opening of a safety device would be considered a deviation from the emission limits for sources using closed vent systems and add-on control devices to comply with the emission limitations in 40 CFR part 63, subpart HHHHH, unless it is a bypass of a control for a process vessel and accounted for as specified in 40 CFR 63.8005(h). In the event a safety device is opened, the owners or operators would be required to comply with the general duty provision in 40 CFR 63.8000(a) to minimize emissions at all times, and to report and record information related to deviations as specified in 40 CFR 63.8075 and 63.8080, respectively, unless it is a bypass of a control for a process vessel and accounted for as specified in 40 CFR 63.8005(h).

2. Electronic Reporting Provisions

Through this proposal, the EPA is proposing that owners and operators of MCM facilities submit electronic copies of required performance test reports, performance evaluation reports, compliance reports, and NOCS reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2018-0747. The proposed rule requires that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website<sup>22</sup> at the time of the test be submitted in the format generated through the use of the ERT and that other performance test results be submitted in portable document format (PDF) using the attachment module of the ERT. Similarly, performance evaluation results of continuous monitoring systems measuring relative accuracy test audit pollutants that are supported by the ERT at the time of the test must be submitted in the format generated through the use of the ERT and other performance evaluation results be submitted in PDF using the attachment module of the ERT.

For performance test reports, performance evaluation reports, compliance reports, and NOCS reports, the proposed rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI. A draft version of the proposed templates for these reports are included in the docket for this rulemaking.<sup>23</sup> The EPA specifically requests comment on the content, layout, and overall design of the templates.

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<sup>22</sup> <https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>.

<sup>23</sup> See *MCM\_Compliance\_Report\_Draft\_Template.xlsx*, available at Docket ID No. EPA-HQ-OAR-2018-0747.

Additionally, the EPA has identified two broad circumstances in which electronic reporting extensions may be provided. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible. The EPA is providing these potential extensions to protect owners and operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. The situation where an extension may be warranted due to outages of the EPA's CDX or CEDRI which precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.8075(i). The situation where an extension may be warranted due to a *force majeure* event, which is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents an owner or operator from complying with the requirement to submit a report electronically as required by this rule is addressed in 40 CFR 63.8075(j). Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with provisions and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources,

simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan<sup>24</sup> to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy<sup>25</sup> developed in response to the White House's Digital Government Strategy.<sup>26</sup> For more information on the benefits of electronic reporting, see the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2018-0747.

### 3. Other Technical Amendments

The EPA is proposing to amend 40 CFR 63.8055(b)(4) to remove reference to paragraph (d)(4) of the Occupational Safety and Health Administration's (OSHA's) Hazard Communication standard, which dealt with OSHA-defined carcinogens. The EPA is proposing to replace that reference with its own list of HAP that must be regarded as potentially carcinogenic based on the EPA guidelines. Although paragraph (d)(4) of OSHA's standard was deleted when the Agency adopted the Globally Harmonized System of Hazard Communication in 2012, it was replaced by section A.6.4.2 of mandatory Appendix A of that standard, which reads as follows:

“Where OSHA has included cancer as a health hazard to be considered by classifiers for a chemical covered by 29 CFR part 1910, Subpart Z, Toxic and Hazardous Substances, chemical manufacturers, importers, and employers shall classify the chemical as a carcinogen.” Thus, where OSHA has regulated workplace exposure to a chemical based, at least in part, on

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<sup>24</sup> *EPA's Final Plan for Periodic Retrospective Reviews*, August 2011. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0747>.

<sup>25</sup> *E-Reporting Policy Statement for EPA Regulations*, September 2013. Available at: <https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

<sup>26</sup> *Digital Government: Building a 21<sup>st</sup> Century Platform to Better Serve the American People*, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html>.

carcinogenic risk, OSHA requires the chemical to be classified as a carcinogen. OSHA suggests that the EPA should refer to section A.6.4.2 of Appendix A of 29 CFR 1910.1200 in its discussion of 40 CFR 63.8055 and consider chemicals that meet this provision be considered “OSHA-defined carcinogens.”

We are proposing to replace these references to carcinogens in 29 CFR 1910.1200(d)(4) with a list (in proposed new Table 11 to 40 CFR part 63, subpart HHHHH) of those organic HAP that must be included in calculating total organic HAP content of a coating material if they are present at 0.1 percent or greater by mass.

We propose to include organic HAP in proposed Table 11 to 40 CFR part 63, subpart HHHHH if they were categorized in the *EPA’s Prioritized Chronic Dose-Response Values for Screening Risk Assessments* (dated May 9, 2014) as a “human carcinogen,” “probable human carcinogen,” or “possible human carcinogen” according to *The Risk Assessment Guidelines of 1986* (EPA/600/8-87/045, August 1987), or as “carcinogenic to humans,” “likely to be carcinogenic to humans,” or with “suggestive evidence of carcinogenic potential” according to the *Guidelines for Carcinogen Risk Assessment* (EPA/630/P-03/001F, March 2005).

There are several additional revisions that we are proposing to 40 CFR part 63, subpart HHHHH to clarify text or correct typographical errors, grammatical errors, and cross-reference errors. These proposed editorial corrections and clarifications are summarized in Table 4 of this preamble.

**Table 4. Summary of Proposed Editorial and Minor Corrections to 40 CFR part 63, subpart HHHHH**

<b>Provision</b>	<b>Proposed Revision</b>
40 CFR 63.7985(d)(2)	Remove the word “future.”
40 CFR 63.8050(c)(3)	Correct reference to subparagraph (c)(2)(i) to (iii) to (c)(3)(i) to (iii).
40 CFR 63.8075(c)(1)	Clarify the paragraphs to say 63.8005 through 63.8030 to include heat exchangers.

40 CFR 63.8075(d)	Change the reference from (d)(2) to (d)(1).
40 CFR 63.8075(d)(2)(ii)	Remove the word “initial.”
40 CFR 63.8090(b)	Clarify the sentence to say, “You are in compliance with this subpart if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with 40 CFR part 60, subpart Kb, and you are in compliance with the monitoring, recordkeeping, and reporting requirements in this subpart.”
Table 8 to 40 CFR part 63, subpart HHHHH	Correct “FFFF” to “HHHHH.”

#### 4. Ongoing Emissions Compliance Demonstrations

As part of an ongoing effort to improve compliance with various federal air emission regulations, the EPA reviewed the compliance demonstration provisions in the MCM NESHAP. Currently, if a source owner or operator chooses to comply with the standards using add-on controls, the results of an initial performance test are used to determine compliance; however, the rule does not require ongoing periodic performance testing for these emission capture systems and add-on controls. We are proposing periodic testing of add-on control devices, in addition to the one-time initial emissions testing and ongoing continuous parametric monitoring, to ensure ongoing compliance with the standards.

Although ongoing monitoring of operating parameters is required by the NESHAP and is conducted by owners or operators, as control devices age over time, the destruction efficiency of the control devices can be compromised due to various factors. The EPA published several documents that identify potential control device operational problems that could decrease emission reduction efficiency, including, but not limited to the following: corrosion due to halogens in HAP exhaust for thermal oxidizers, catalyst deactivation or poisoning for catalytic oxidizers, leaking valves for regenerative oxidizers, adsorbent plugging and fouling for

adsorbers, and changing waste stream temperatures and absorption characteristics for condensers and concentrators.<sup>27</sup>

The Institute of Clean Air Companies (ICAC), an industry trade group currently representing 50 emission control device equipment manufacturers, corroborated the fact that control equipment degrades over time in their comments in a prior rulemaking. In their comments on proposed revisions to the NESHAP General Provisions (72 FR 69, January 3, 2007), ICAC stated that ongoing maintenance and checks of control devices are necessary in order to ensure emissions control technology remains effective. Based on the need for vigilance in maintaining equipment to stem degradation, in this action, we are proposing to require periodic performance testing of certain add-on control devices on a 5-year cycle and removing the allowance for demonstration of compliance using a design evaluation for “small control devices,” defined as controlling less than 10 tons of HAP per year. We are not proposing to revise performance demonstration requirements for condensers because outlet gas temperature correlates directly with control efficiency and continuous monitoring of outlet gas temperature provides a direct indication of whether control efficiency has been met. Likewise, the proposed performance testing provision of incineration control devices allows an exception from periodic testing for facilities using instruments to continuously measure VOC emissions. Using VOC continuous emissions monitoring systems (CEMS) would be a direct indicator of compliance. The use of VOC CEMS to demonstrate compliance would obviate the need for initial or periodic control device testing. Our available data indicates that the oxidizers are the only other control

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<sup>27</sup> *Control Techniques for Volatile Organic Compound Emissions from Stationary Sources*, EPA/453/R-92-018, December 1992, *Control Technologies for Emissions from Stationary Sources*, EPA/625/6-91/014, June 1991, and *Survey of Control Technologies for Low Concentration Organic Vapor Gas Streams*, EPA-456/R-95-003, May 1995.

device used to comply with this standard. Incinerators, however, could experience this degradation and reduced control efficiency that would not be captured with operating parameter monitoring of temperature.

We have identified several states with MCM facilities that already require such testing every 5 years synchronized with 40 CFR part 70 air operating permit renewals.

The proposed periodic performance testing provisions would require owners or operators of facilities complying with the standards using a closed vent system to control and which are not already on a 5-year testing schedule to conduct the first of the periodic performance tests within 3 years of the effective date of the revised standards. Afterward, the owners or operators would conduct periodic testing before they renew their operating permits, but no longer than 5 years following the previous performance test. Additionally, owners or operators of facilities that have already tested as a condition of their permit within the last 2 years before the effective date would be permitted to maintain their current 5-year schedule and not be required to move up the date of the next test to the 3-year date specified above. This proposed provision would require periodic air emissions testing to measure organic HAP destruction or removal efficiency at the inlet and outlet of the thermal oxidizer. The emissions would be measured as total gaseous organic mass emissions as carbon using either EPA Method 18 of appendix A-6 to 40 CFR part 60, or EPA Method 25 or 25A of appendix A-7 to 40 CFR part 60, which are the methods currently required for the initial compliance demonstration.

We estimate that the cost associated with this proposed provision, which includes a control device emissions destruction or removal efficiency test using EPA Method 18, 25 or 25A, would be approximately \$19,000 per control device every 5 years for those sources not already required by their title V operating permit to conduct testing at least every 5 years. The

cost estimate is included in the memorandum titled *Draft Costs/Impacts of the 40 CFR Part 63 Subpart HHHHH Monitoring Review Revisions*, in the MCM Docket. Based on the development of cost estimates for other NESHAP, we know that certain states typically require periodic testing as a condition of renewing title V operating permits. We have assumed that facilities located in these states are currently required to conduct periodic performance tests as a condition of their 40 CFR part 70 operating permits, and the proposed periodic testing would not add any new testing provisions and the estimated costs would not apply to these facilities. We have assumed that facilities in other states would have additional testing provisions and costs. Periodic performance tests ensure that any thermal oxidizers used to comply with the NESHAP in the future would be properly maintained over time, thereby reducing the potential for acute emissions episodes and non-compliance.

*E. What compliance dates are we proposing?*

Amendments to the MCM NESHAP proposed in this rulemaking for adoption under CAA section 112(d)(2) and (3) are subject to the compliance deadlines outlined in the CAA under section 112(i).

For all of the provisions we are proposing under CAA sections 112(d)(2) and (3), we are proposing all affected source owners or operators must comply with all of the amendments no later than 3 years after the effective date of the final rule, or upon startup, whichever is later. For existing sources, CAA section 112(i) provides that the compliance date be as expeditious as practicable, but no later than 3 years after the effective date of the standard. (“Section 112(i)(3)’s three-year maximum compliance period applies generally to any emission standard...promulgated under [section 112].” *Association of Battery Recyclers v. EPA*, 716 F.3d 667, 672 (D.C. Cir. 2013)). In determining what compliance period is as expeditious as

practicable, we consider the amount of time needed to plan and construct projects and change operating procedures. As provided in CAA section 112(i), all new affected sources would comply with these provisions by the effective date of the final amendments to the MCM NESHAP or upon startup, whichever is later.

All affected facilities would have to continue to meet the current provisions of 40 CFR part 63, subpart HHHHH until the applicable compliance date of the amended rule. The final action is not expected to be a “major rule” as defined by 5 U.S.C. 804(2), so the effective date of the final rule will be the promulgation date as specified in CAA section 112(d)(10).

We are proposing to change the provisions for SSM by removing the exemption from the emission limitations (*i.e.*, emission limits, operating limits, and work practice standards) during SSM periods and by removing the provision to develop and implement an SSM plan. We are also proposing that owners and operators will now need to take into account control device bypass periods, even if during SSM periods, when demonstrating compliance with the percent emission reduction provisions for process vessels in Table 1 to 40 CFR part 63, subpart HHHHH.

Our experience with similar industries further shows that this sort of regulated facility generally requires a substantial time period to read and understand the amended rule provisions; to evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; and to update their operation, maintenance, and monitoring plan to reflect the revised provisions. It is also possible that some facilities may need to upgrade their emission capture and control systems because of the proposed changes to the bypass provisions in the compliance calculations. These upgrades may require additional time to evaluate the current control system, plan for needed upgrades, and

then design, purchase, and install those upgrades. From our assessment of the time frame needed for compliance with the entirety of the revised requirements related to the SSM provisions, including the need to account for bypass periods, the EPA considers a period of 3 years to be the most expeditious compliance period practicable and, thus, is proposing that existing affected sources be in compliance with 40 CFR part 63, subpart HHHHH's revised SSM provisions within 3 years of the final amendment's effective date.

Therefore, for all affected sources that commence construction or reconstruction on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we are proposing that it is necessary to provide 3 years after the effective date of the final rule (or upon startup, whichever is later) for owners and operators to comply with the provisions that have been amended to remove the exemption from the emission limitations during SSM periods. For all affected sources that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we are proposing that owners and operators comply with the amended provisions by the effective date of the final rule (or upon startup, whichever is later).

As discussed elsewhere in this preamble, we are also proposing to add a provision that notifications, performance test results, and semiannual compliance reports be submitted electronically. We are proposing that the semiannual compliance report be submitted electronically using a new template, which is available for review and comment as part of this action. Regarding electronic reporting, our experience with similar industries shows that a time period of a minimum of 90 days, and, more typically, 180 days, is generally necessary to convert reporting mechanisms to install necessary hardware and software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI, test

these new electronic submission capabilities, and reliably employ electronic reporting. From our assessment of the time frame needed for compliance with the new electronic reporting provisions, the EPA considers a period of 180 days to be the most expeditious compliance period practicable and, thus, is proposing that all sources would begin complying with the new electronic reporting provisions beginning no later than 180 days after the regulation's effective date.

We solicit comment on these proposed compliance periods, and we specifically request submission of information from sources in this source category regarding specific actions that would need to be undertaken to comply with the proposed amended provisions and the time needed to make the adjustments for compliance with any of the revised provisions. We note that information provided may result in changes to the proposed compliance dates.

## **V. Summary of Cost, Environmental, and Economic Impacts**

### *A. What are the affected sources?*

Currently, 43 major sources subject to the MCM NESHAP are operating in the United States. The affected source under the NESHAP is the facility-wide collection of equipment used to manufacture coatings and includes all process vessels; storage tanks for feedstocks and products; components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems; wastewater tanks; transfer racks; and cleaning operations. A coating is defined as material such as paint, ink, or adhesive that is intended to be applied to a substrate and consists of a mixture of resins, pigments, solvents, and/or other additives, where the material is produced by a manufacturing operation where materials are blended, mixed, diluted, or otherwise formulated.

*B. What are the air quality impacts?*

At the current level of control, estimated emissions of volatile organic HAP from the MCM source category are approximately 405 tpy.

The proposed amendments require that all 43 major sources in the MCM source category comply with the relevant emission standards at all times, including periods of SSM. We were unable to quantify the emissions that occur during periods of SSM or the specific emissions reductions that would occur as a result of this action. However, eliminating the SSM exemption has the potential to reduce emissions by requiring facilities to meet the applicable standard during SSM periods.

Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (*e.g.*, increased secondary emissions of criteria pollutants from power plants). Energy impacts consist of the electricity and steam needed to operate control devices and other equipment. The proposed amendments would have no effect on the energy needs of the affected facilities and would, therefore, have no indirect or secondary air emissions impacts.

*C. What are the cost impacts?*

We estimate that to comply with the proposed amendments each facility in the MCM source category will experience increased reporting and recordkeeping costs. The recordkeeping and reporting costs are presented in section VIII.C of this preamble. The costs include time to read and understand the rule amendments. Costs associated with elimination of the SSM exemption were estimated as part of the reporting and recordkeeping costs and include time for re-evaluating previously developed SSM record systems. Costs associated with the provision to electronically submit notifications and semi-annual compliance reports using CEDRI were

estimated as part of the reporting and recordkeeping costs and include time for becoming familiar with CEDRI and the reporting template for semi-annual compliance reports.

We are also proposing a provision for performance testing no less frequently than every 5 years for sources in the MCM source category using add-on controls to demonstrate compliance. We estimate that 12 facilities subject to the MCM NESHAP and using add-on control devices would incur costs to conduct control device performance testing because they are not required by their permits to conduct testing every 5 years. This total does not include facilities in the MCM source category that have add-on controls and are currently required to perform periodic performance testing as a condition of their state operating permit. The cost for a facility to conduct a destruction or removal efficiency performance test using EPA Method 25 or 25A is estimated to be about \$19,000. The total cost for all 12 facilities to test their add-on control devices in a single year, plus one facility completing a retest to account for 5 percent of control devices failing to pass the first test, would be \$247,000. The total annualized testing cost, including retests, is approximately \$57,000 per year at an interest rate of 5.25 percent and an additional \$6,000 in reporting costs per facility in the year in which the test occurs for the MCM source category. For further information on the potential costs, see the cost tables in the memoranda titled *Estimated Costs/Impacts of the 40 CFR Part 63 Subpart HHHHHH Monitoring Review Revisions*, May 2019, and the *Economic Impact and Small Business Screening Assessments for Proposed Amendments to National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing Facilities (Subpart HHHHHH)*, in the MCM Docket.

*D. What are the economic impacts?*

The economic impact analysis is designed to inform decision-makers about the potential economic consequences of a regulatory action. For the current proposal, the EPA estimated the cost of becoming familiar with the rule and re-evaluating previously developed SSM record systems and performing periodic emissions testing at certain facilities with add-on controls that are not already required to perform testing. To assess the maximum potential impact, the largest cost expected to be experienced in any 1 year is compared to the total sales for the ultimate owner of the affected facilities to estimate the total burden for each facility.

For the proposed revisions to the MCM NESHAP, the 2019 equivalent annualized value (in 2018\$) of the costs over the period 2020-2026 is \$66,000 assuming a 3-percent discount rate and \$73,000 assuming a 7-percent discount rate. The 43 affected facilities are owned by 27 different parent companies, and the total costs associated with the proposed amendments range from 0.000005 to 0.025 percent of annual sales revenue per ultimate owner. These costs are not expected to result in a significant market impact, regardless of whether they are passed on to the purchaser or absorbed by the firms.

The EPA also prepared a small business screening assessment to determine whether any of the identified affected entities are small entities, as defined by the U.S. Small Business Administration. Two of the facilities potentially affected by the proposed revisions to the MCM NESHAP are small entities. However, the costs associated with the proposed amendments for these two affected small entities range from 0.002 to 0.025 percent of annual sales revenues per ultimate owner. Therefore, there are no significant economic impacts on a substantial number of small entities from these proposed amendments.

More information and details of this analysis are provided in the technical document titled *Economic Impact and Small Business Screening Assessments for Proposed Amendments to*

*the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing (Subpart HHHHH), available in the MCM Docket.*

*E. What are the benefits?*

As stated above in section V.B of this preamble, we were unable to quantify the specific emissions reductions associated with eliminating the SSM exemption.

Because these proposed amendments are not considered economically significant, as defined by Executive Order 12866, we did not monetize the benefits of reducing these emissions. This does not mean that there are no benefits associated with the potential reduction in volatile organic HAP from this rule.

**VI. Request for Comments**

We solicit comments on this proposed action. In addition to general comments on this proposed action, we are also interested in receiving additional data that may improve the risk assessments and other analyses. We are specifically interested in receiving any improvements to the data used in the site-specific emissions profiles used for risk modeling. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Section VII of this preamble provides more information on submitting data.

**VII. Submitting Data Corrections**

The site-specific emissions profiles used in the source category risk and demographic analyses and instructions are available for download on the RTR website at <https://www.epa.gov/stationary-sources-air-pollution/miscellaneous-coating-manufacturing-national-emission-standards>. The data files include detailed information for each HAP emissions release point for the facilities in the source category.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any “improved” data that you have, if available. When you submit data, we request that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR website, complete the following steps:

1. Within this downloaded file, enter suggested revisions to the data fields appropriate for that information.

2. Fill in the commenter information fields for each suggested revision (*i.e.*, commenter name, commenter organization, commenter email address, commenter phone number, and revision comments).

3. Gather documentation for any suggested emissions revisions (*e.g.*, performance test reports, material balance calculations).

4. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to Docket ID No. EPA-HQ-OAR-2018-0747 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at that facility (or facilities). We request that all data revision comments be submitted in the form of updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR website at <https://www.epa.gov/stationary-sources-air-pollution/miscellaneous-coating-manufacturing-national-emission-standards>.

## **VIII. Statutory and Executive Order Reviews**

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

*A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was, therefore, not submitted to OMB for review.

*B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs*

This action is not expected to be an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

*C. Paperwork Reduction Act (PRA)*

The information collection activities in this proposal have been submitted for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 2115.06. You can find a copy of the ICR in the MCM Docket (Docket ID No. EPA-HQ-OAR-2018-0747), and it is briefly summarized here.

The EPA is proposing to revise the SSM provisions of the rule, proposing to require periodic testing of control devices, and proposing the use of electronic data reporting for future performance test data submittals, notifications, and reports. This information is being collected to assure compliance with 40 CFR part 63, subpart HHHHH.

*Respondents/affected entities:* Facilities manufacturing surface coatings.

*Respondent's obligation to respond:* Mandatory (40 CFR part 63, subpart HHHHH).

*Estimated number of respondents:* In the 3 years after the amendments are final, approximately 43 respondents per year would be subject to the NESHAP and no additional respondents are expected to become subject to the NESHAP during that period.

*Frequency of response:* The total number of responses in year 1 is 175, in year 2 is 46, and in year 3 is 85.

*Total estimated burden:* The average annual burden of the proposed amendments to the 43 MCM facilities over the 3 years if the amendments are finalized is estimated to be 565 hours (per year). The average annual burden to the Agency over the 3 years after the amendments are final is estimated to be 116 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* The average annual cost of the proposed amendments to the MCM facilities is \$65,000 in labor costs in the first 3 years after the amendments are final. The average annual capital and operation and maintenance costs are \$82,000. The total average annual agency cost of the proposed amendments over the first 3 years after the amendments are final is estimated to be \$5,500.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to [OIRA\\_submission@omb.eop.gov](mailto:OIRA_submission@omb.eop.gov), Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA will respond to any ICR-related comments in the final rule.

#### *D. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. The annualized costs associated with the proposed amendments in this action for the affected small entities is described in section V.D above and additional detail is provided in the economic impact memorandums associated with this action. We have, therefore, concluded that this action will have no net regulatory burden for all directly regulated small entities.

#### *E. Unfunded Mandates Reform Act (UMRA)*

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

#### *F. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

#### *G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. No tribal facilities are known to be engaged in any of the industries that would be affected by this action (MCM). Thus, Executive Order 13175 does not apply to this action.

*H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in sections III.A and C, and IV.A, B, and C of this preamble, and are further documented in the *Miscellaneous Coating Manufacturing Risk Assessment Report*, in the MCM Docket.

*I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use*

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

*J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51*

This action involves technical standards. Therefore, the EPA conducted searches for the MCM NESHAP through the Enhanced National Standards Systems Network (NSSN) Database managed by the American National Standards Institute (ANSI). We also contacted voluntary consensus standards (VCS) organizations and accessed and searched their databases. We conducted searches for EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 18, 21, 22, 24, 25, 25A, 25D, 26, 26A, and 29 of 40 CFR part 60, appendix A; 301, 305, 311, 316, and 320 of 40 CFR part 63, appendix A; 624, 625, 1624, 1625, 1666, and 1671 of 40 CFR part 136, appendix A; and 8260, 8260B (SW-846), 8270, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846 third edition. During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's reference method, the EPA ordered a copy of

the standard and reviewed it as a potential equivalent method. We reviewed all potential standards to determine the practicality of the VCS for this rule. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering, and policy equivalence to procedures in the EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS.

No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 21, 22, 25D, 305, 316, 625, 1624, 1625, 1666, 1671, 8260, 8260B (SW-846), and 8270. The following VCS were identified as acceptable alternatives to the EPA test methods for the purpose of this rule.

The EPA proposes to use the VCS ANSI/ASME PTC 19-10-1981 Part 10 (2010), "Flue and Exhaust Gas Analyses," as an acceptable alternative to EPA Method 3B for the manual procedures only and not the instrumental procedures. This method determines quantitatively the gaseous constituents of exhausts resulting from stationary combustion sources.

Additionally, the EPA proposes to use the VCS ASTM D6420-18, "Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry," as an acceptable alternative to EPA Method 18 with the following caveats. This ASTM procedure has been approved by the EPA as an alternative to EPA Method 18 only when the target compounds are all known and the target compounds are all listed in ASTM D6420 as measurable. We are proposing that ASTM D6420-18 should not be used for methane and ethane because the atomic mass is less than 35; and ASTM D6420 should never be specified as a total VOC method. This test method employs a direct interface gas chromatograph/mass spectrometer to identify and quantify VOC.

The EPA proposes to use the VCS ASTM D2369-10(2015) el, "Test Method for Volatile Content of Coatings"; ASTM D2697-03 (2014), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings"; and ASTM D3960-98, "Standard Practice for Determining VOC Content of Paints and Related Coatings," as acceptable alternatives to EPA Method 24. The ASTM D2369-10 (2015) method describes a procedure for the determination of the weight percent volatile content of solvent borne and waterborne coatings. The ASTM D2697-03 (2014) method is intended to provide a measure of the volume of dry coating obtainable from a given volume of liquid coating. The ASTM D3960-98 method measures the VOC content of solvent borne and waterborne paints and related coatings as determined from the quantity of material released from a sample under specified bake conditions and subtracting exempt volatile compounds and water if present.

The EPA proposes to use the VCS CARB Method 310, "Determination of VOC in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products," as an acceptable alternative to EPA Method 311. Method 310 determines the total volatile material in a product and the presence of any compounds and is also used to determine the percent by weight of the reactive organic compounds contained in aerosol coating products.

In addition, the EPA proposes to use the VCS ASTM D6348-12e1, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy," as an acceptable alternative to EPA Method 320 of appendix A to 40 CFR part 63 with caveats requiring inclusion of selected annexes to the standard as mandatory. We are proposing the test plan preparation and implementation in the Annexes to ASTM D6348-12e1, Sections A1 through A8 are mandatory; and in ASTM D6348-12e1, Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). We are proposing

that in order for the test data to be acceptable for a compound, %R must be  $70\% \leq R \leq 130\%$ . If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). We are proposing that the %R value for each compound be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

$$\text{Reported Results} = (\text{Measured Concentration in the Stack} \times 100) / \% R.$$

The ASTM D6348-12e1 method is an extractive FTIR based field test method is used to quantify gas phase concentrations of multiple target analytes from stationary source effluent.

The six ASTM methods (ASTM D6420-18, ASTM D2369-10(2015)e1, ASTM D6348-12e1, ASTM D2697-03 (2014), ASTM D3960-98, and ASTM D6348-03) are available at ASTM International, 1850 M Street NW, Suite 1030, Washington, DC 20036. See <https://www.astm.org/>. The CARB method (VCS CARB Method 310) is available at CARB, 1001 I Street, Sacramento, CA 95814. See <https://ww2.arb.ca.gov/>. The ANSI/ASME PTC 19.10-2010 Part 10 (2010) method is available at American National Standards Institute (ANSI), 1899 L Street, NW, 11th floor, Washington, DC 20036 and the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990 See <https://www.ansi.org> and <https://www.asme.org>.

Finally, the search identified seven other VCS that were potentially applicable for this rule in lieu of the EPA reference methods. After reviewing the available standards, the EPA determined that seven candidate VCS identified for measuring emissions of pollutants or their surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data and other important technical and policy

considerations. Additional information for the VCS search and determinations can be found in the memorandum, *Voluntary Consensus Standard Results for National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coatings Manufacturing*, which is available in the docket for this action.

The EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable VCS, and to explain why the EPA should use such standards in this regulation.

*K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in sections IV.A and IV.B of this preamble and the technical report titled *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Miscellaneous Coating Manufacturing Operations*, January 2019, available in the MCM Docket.

As discussed in sections IV.A and B of this preamble, we performed a demographic analysis for the MCM source category, which is an assessment of risks to individual demographic groups, of the population close to the facilities (within 50 km and within 5 km). In this analysis, we evaluated the distribution of HAP-related cancer risks and noncancer hazards from the MCM source category across different social, demographic, and economic groups within the populations living near operations identified as having the highest risks.

The results of the MCM source category demographic analysis indicate that approximately 3,700 people are exposed to a cancer risk greater than or equal to 1-in-1 million and no one is exposed to a chronic noncancer HI greater than 1. For those people with a cancer risk greater than or equal to 1-in-1 million, the African American and Below Poverty Level demographic groups are higher than their respective nationwide percentages.

We do not expect this proposal to achieve significant reductions in HAP emissions. The EPA anticipates that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994) because it does not significantly affect the level of protection provided to human health or the environment. The documentation for this decision is contained in section IV of this preamble and the technical report titled *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Miscellaneous Coating Manufacturing Operations*, January 2019, which is available in the MCM Docket.

### **List of Subjects in 40 CFR Part 63**

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: August 15, 2019.

Andrew R. Wheeler,  
Administrator.

For the reasons set forth in the preamble, the Environmental Protection Agency proposes to amend 40 CFR part 63 as follows:

**PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES**

1. The authority citation for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

**Subpart A—[Amended]**

2. Section 63.14 is amended by:

- a. Adding paragraph (e)(2),
- b. Revising paragraphs (h)(26), and (30);
- c. Redesignating paragraphs (h)(92) through (111) as paragraphs (h)(94) through (113) and paragraphs (h)(50) through (h)(91) as paragraphs (h)(51) through (h)(92), respectively;
- d. Adding new paragraph (h)(50);
- e. Revising newly redesignated paragraph (h)(85);
- f. Adding new paragraph (h)(93);
- g. Redesignating paragraphs (k)(1) through (k)(5) as paragraphs (k)(2) through (k)(6);

and

- h. Adding new paragraph (k)(1).

The revisions and additions read as follows:

**§63.14 Incorporations by reference.**

\* \* \* \* \*

(e) \* \* \*

(2) ANSI/ASME PTC 19.10-1981 (2010), Flue and Exhaust Gas Analyses (Part 10, Instruments and Apparatus), re-issued 2010, IBR approved for §63.8000(d).

\* \* \* \* \*

(h) \* \* \*

(26) ASTM D2369-10 (Reapproved 2015)e, Standard Test Method for Volatile Content of Coatings, approved June 1, 2015, IBR approved for §§63.4141(a) and (b), 63.4161(h), 63.4321(e), 63.4341(e), 63.4351(d), 63.4741(a), 63.4941(a) and (b), 63.4961(j), and 63.8055(b).

\* \* \* \* \*

(30) ASTM D2697-03 (Reapproved 2014), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, IBR approved for §§ 63.4141(b), 63.4741(a) and (b), 63.4941(b),, and 63.8055(b).

\* \* \* \* \*

(50) ASTM D3960-98, Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings IBR approved for § 63.8055(b).

\* \* \* \* \*

(85) ASTM D6348-12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for §§63.1571(a), and 63.8000(d).

\* \* \* \* \*

(93) ASTM D6420-18, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §63.8000(d).

\* \* \* \* \*

(k) \* \* \*

(1) Method 310, “Determination of Volatile Organic Compounds in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products,” amended August 1, 2014, IBR approved for §63.8055(b).

\* \* \* \* \*

**Subpart HHHHH—National Emission Standards for Hazardous Air Pollutants:  
Miscellaneous Coating Manufacturing**

3. Section 63.7985 is amended by revising paragraphs (a)(1) through (3), paragraph (b) introductory text, paragraphs (b)(1) through (3), and (d)(1) through (4) to read as follows:

**§63.7985 Am I subject to the requirements in this subpart?**

(a) \* \* \*

(1) Are located at or are part of a major source of hazardous air pollutants (HAP) emissions, as defined in section 112(a) of the Clean Air Act (CAA);

(2) Manufacture coatings as defined in §63.8105;

(3) Process, use, or produce HAP; and

\* \* \* \* \*

(b) Miscellaneous coating manufacturing operations include the facility-wide collection of equipment described in paragraphs (b)(1) through (4) of this section that is used to manufacture coatings as defined in §63.8105. Miscellaneous coating manufacturing operations also include cleaning operations.

(1) Process vessels;

(2) Storage tanks for feedstocks and products;

(3) Components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems; and

\* \* \* \* \*

(d) \* \* \*

(1) Research and development facilities, as defined in section 112(c)(7) of the CAA;

(2) The affiliated operations located at an affected source under subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), MMMM (National Emission Standards for Miscellaneous Metal Parts and Products Surface Coating Operations) and SSSS (NESHAP: Surface Coating of Metal Coil) of this part. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater;

(3) Ancillary equipment such as boilers and incinerators (only those not used to comply with the emission limits in Tables 1 through 5 to this subpart), chillers and refrigeration systems, and other equipment that is not directly involved in the manufacturing of a coating (*i.e.*, it operates as a closed system, and materials are not combined with materials used to manufacture the coating);

(4) Quality assurance/quality control laboratories; or

\* \* \* \* \*

4. Section 63.7995 is amended by revising paragraph (a) introductory text and paragraph (b), and adding paragraph (e) to read as follows:

**§63.7995 When do I have to comply with this subpart?**

\* \* \* \* \*

(a) Except as specified in paragraph (e) of this section, if you have a new affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

\* \* \*

(b) Except as specified in paragraphs (e) of this section, if you have an existing affected source on December 11, 2003, then you must comply with the requirements for existing sources in this subpart no later than December 11, 2006.

\* \* \* \* \*

(e) All affected sources that commenced construction or reconstruction on or before **[DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]**, must be in compliance with the requirements listed in paragraphs (e)(1) through (5) of this section upon initial startup or **[date 3 years after date of publication of final rule in the Federal Register]**, whichever is later. All affected sources that commenced construction or reconstruction after **[DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]**, must be in compliance with the requirements listed in paragraphs (e)(1) through (5) of this section upon initial startup, or **[date of publication of final rule in the Federal Register]**, whichever is later.

(1) The general requirements specified in §63.8000(a)(2), (b)(2), (d)(8), and (f); and §63.8005(d)(5) and (h).

(2) The reporting requirements specified in §63.8075(e)(5), (e)(6)(ii)(B), (e)(6)(ii)(D), (e)(6)(iii)(C), and (e)(6)(iii)(E).

(3) The recordkeeping requirements specified in §63.8080(c), (e), (f), (h), and (i).

(4) The definitions specified in §63.8105.

(5) The general provisions as specified in Table 10 to subpart HHHHH.

5. Section 63.8000 is amended by:

a. Revising paragraphs (a), (b)(2), (c)(3), introductory text to paragraph (d)(1), and paragraphs (d)(1)(i) and (iii);

e. Removing and reserving paragraph (d)(2);

f. Revising paragraphs (d)(3),(4)(i)(A), (ii)(C), and (iv); and

h. Adding paragraphs (d)(8), (e), and (f).

The revisions and additions read as follows:

**§63.8000 What are my general requirements for complying with this subpart?**

(a) You must comply with paragraphs (a)(1) and (2) of this section.

(1) Except as specified in paragraph (a)(2) of this section, you must be in compliance with the emission limits and work practice standards in Tables 1 through 5 to this subpart at all times, except during periods of startup, shutdown, and malfunction. You must meet the requirements specified in paragraphs (b) and (c) of this section. You must meet the requirements specified in §§63.8005 through 63.8025 (or the alternative means of compliance in §63.8050), except as specified in paragraph (d) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§63.8070, 63.8075, and 63.8080.

(2) Beginning no later than the compliance dates specified in §63.7995(e), paragraph (a)(1) of this section no longer applies. Instead, beginning no later than the compliance dates specified in §63.7995(e), you must be in compliance with the emission limits and work practice standards in Tables 1 through 5 to this subpart at all times. You must meet the requirements specified in paragraphs (b) and (c) of this section. You must meet the requirements specified in §§63.8005 through 63.8030 (or the alternative means of compliance in §63.8050), except as specified in paragraph (d) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§63.8070, 63.8075, and 63.8080.

(b) \* \* \*

(2) You must comply with paragraphs (b)(2)(i) and (ii) of this section.

(i) Except as specified in paragraph (b)(2)(ii) of this section, opening of a safety device, as defined in §63.8105, is allowed at any time conditions require it to avoid unsafe conditions.

(ii) Beginning no later than the compliance dates specified in §63.7995(e), paragraph (b)(2)(i) of this section no longer applies. Instead, opening of a safety device, as defined in §63.8105, is considered a deviation, as defined in §63.8105, unless it is a bypass of a control for a process vessel and accounted for as specified in §63.8005(h).

(c) \* \* \*

(3) If you use a halogen reduction device to reduce hydrogen halide and halogen HAP emissions that are generated by combusting halogenated vent streams, you must meet the requirements of §63.994, except as specified in paragraph (f) of this section, and the requirements referenced therein. If you use a halogen reduction device before a combustion device, you must determine the halogen atom emission rate prior to the combustion device according to the procedures in §63.115(d)(2)(v).

(d) \* \* \*

(1) Requirements for performance tests. The requirements specified in paragraphs (d)(1)(i) through (vi) of this section apply instead of or in addition to the requirements for performance testing of control devices as specified in subpart SS of 40 CFR part 63.

(i) Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to 40 CFR part 60. As an alternative to EPA Method 3B for the manual procedures only and not the instrumental procedures, you may use ANSI/ASME PTC 19-10-1981 Part 10 (incorporated by reference, see §63.14) as an acceptable alternative.

\* \* \* \* \*

(iii) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, to comply with any of the emission limits specified in Tables 1 through 6 to this subpart you may use the alternatives specified in paragraphs (d)(1)(iii)(A) or (B) of this section.

(A) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, you may use Method 320 of 40 CFR part 60, appendix A. When using Method 320, you must follow the analyte spiking procedures of section 13 of Method 320, unless you demonstrate that the complete spiking procedure has been conducted at a similar source. As an alternative to Method 320 of Appendix A to 40 CFR part 63, you may use ASTM Method D6348-12e1 (incorporated by reference, see §63.14), with the caveats that the test plan preparation and implementation in the Annexes to ASTM Method D6348-12e1, Sections A1 through A8 are mandatory; and in ASTM Method D6348-12e1 Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound,  $70\% \geq R \leq 130\%$ . If the

%R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

$$\text{Reported Results} = (\text{Measured Concentration in the Stack} \times 100) / \% R.$$

(B) As an alternative to using EPA Method 18, you may also use ASTM D6420-18 (incorporated by reference, see §63.14), but only when the target compounds are all known and the target compounds are all listed in ASTM D6420-18 as measurable; ASTM D6420-18 should not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

\* \* \* \* \*

(vi) You must conduct periodic performance tests and establish the operating limits required by §§63.8005(e), 63.8010(b)(1), and 63.8050(d)(3) within 5 years following the previous performance test. You must conduct the initial or first periodic performance test before **[date 3 years after date of publication of final rule in the Federal Register]**, unless you are already required to complete periodic performance tests as a requirement of renewing your facility's operating permit under 40 CFR part 70, or 40 CFR part 71, and have conducted a performance test on or after **[date 2 years before date of publication of final rule in the Federal Register]**. Thereafter you must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test.

(2) [Reserved]

(3) Periodic verification. For a control device with total inlet HAP emissions less than 1 ton per year (tpy), you must establish at least one operating limit for a parameter that you will measure and record at least once per averaging period (*i.e.*, daily or block) to verify that the control device is operating properly. You may elect to measure the same parameter that is required for control devices that control inlet HAP emissions equal to or greater than 1 tpy. If the parameter will not be measured continuously, you must request approval of your proposed procedure in the precompliance report. You must identify the operating limit or range and the measurement frequency, and you must provide rationale to support how these measurements demonstrate the control device is operating properly.

(4) \* \* \*

(i) \* \* \*

(A) If you wish to use a CEMS other than a Fourier Transform Infrared Spectroscopy (FTIR) meeting the requirements of Performance Specification 15 or a hydrogen chloride (HCl) CEMS meeting the requirements of Performance Specification 18 and Quality Assurance Procedure 6 to measure hydrogen halide and halogen HAP before we promulgate a Performance Specification for such CEMS, you must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in §63.8.

\* \* \* \* \*

(ii) \* \* \*

(C) For CEMS meeting Performance Specification 8 used to monitor performance of a noncombustion device, determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 on the control device inlet stream, calibrate the monitor on the predominant organic HAP, and report the results as C<sub>1</sub>. Use Method 18, ASTM

D6420-18, or any approved alternative as the reference method for the relative accuracy tests, and report the results as  $C_1$ .

\* \* \* \* \*

(iv) The CEMS data must be reduced to operating day or operating block averages computed using valid data, except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality assurance, or maintenance activities are being performed. An operating block is a period of time from the beginning to end of batch operations in the manufacturing of a coating. Operating block averages may be used only for process vessel data.

\* \* \* \* \*

(8) Beginning no later than the compliance dates specified in §63.7995(e), in lieu of the requirements specified in §63.8(d)(3), you must keep the written quality control program procedures required by §63.8(d)(2) on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, you shall keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under §63.8(d)(2).

(e) *General Duty*. Beginning no later than **[DATE 180 DAYS AFTER THE DATE THE FINAL RULE IS PUBLISHED IN THE FEDERAL REGISTER]**, at all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution

control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(f) Beginning no later than the compliance dates specified in §63.7995(e), the referenced provisions specified in paragraphs (f)(1) through (22) of this section do not apply when demonstrating compliance with this subpart through referenced provisions of subpart SS, subpart UU, and subpart TT of this part.

(1) §63.983(a)(5) of subpart SS.

(2) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.984(a) of subpart SS.

(3) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.985(a) of subpart SS.

(4) The phrase “other than start-ups, shutdowns, or malfunctions” in §63.994(c)(1)(ii)(D) of subpart SS.

(5) §63.996(c)(2)(ii) of subpart SS.

(6) §63.997(e)(1)(i) of subpart SS.

(7) The term “breakdowns” from §§63.998(b)(2)(i) of subpart SS.

(8) §63.998(b)(2)(iii) of subpart SS.

(9) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(A) of subpart SS.

(10) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(C) of subpart SS.

(11) The phrase “, except as provided in paragraphs (b)(6)(i)(A) and (B) of this section” from §63.998(b)(6)(i) of subpart SS.

(12) The second sentence of §63.998(b)(6)(ii) of subpart SS.

(13) §63.998(c)(1)(ii)(D), (E), (F), and (G) of subpart SS.

(14) §63.998(d)(1)(ii) of subpart SS.

(15) §63.998(d)(3)(i) and (ii) of subpart SS.

(16) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from §63.1005(e)(4)(i) of subpart TT.

(17) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1007(e)(1)(ii)(A) of subpart TT.

(18) The phrase “(except during periods of startup, shutdown, or malfunction)” from §63.1009(e)(1)(i)(A) of subpart TT.

(19) The phrase “(except during periods of startup, shutdown, or malfunction)” from §63.1012(b)(1) of subpart TT.

(20) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1026(e)(1)(ii)(A) of subpart UU.

(21) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1028(e)(1)(i)(A) of subpart UU.

(22) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1031(b)(1) of subpart UU.

6. Section 63.8005 is amended by:

- a. Revising paragraph (a)(2);
- b. Revising paragraph (d)(1) and adding paragraph (d)(5);
- c. Revising paragraph (e) introductory text and paragraph (e)(2);
- d. Revising paragraph (g); and
- e. Adding paragraph (h)

The revisions and addition read as follows:

**§63.8005 What requirements apply to my process vessels?**

(a) \* \* \*

(2) For each control device used to comply with Table 1 to this subpart, you must comply with subpart SS of this part 63 as specified in §63.8000(c), except as specified in §63.8000(d) and (f), and paragraphs (b) through (g) of this section.

\* \* \* \* \*

(d) \* \* \*

(1) To demonstrate initial compliance with a percent reduction emission limit in Table 1 to this subpart, you must conduct the performance test or design evaluation under conditions as specified in §63.7(e)(1), except as specified in paragraph (d)(5) of this section, and except that the performance test or design evaluation must be conducted under worst-case conditions. Also, the performance test for a control device used to control emissions from process vessels must be conducted according to §63.1257(b)(8), including the submittal of a site-specific test plan for approval prior to testing. The requirements in §63.997(e)(1)(i) and (iii) also do not apply for

performance tests conducted to determine compliance with the emission limits for process vessels.

\* \* \* \* \*

(5) Beginning no later than the compliance dates specified in §63.7995(e), §63.7(e)(1) no longer applies and performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator or an applicable subpart. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(e) Establishing operating limits. You must establish operating limits under the conditions required for your initial compliance demonstration and periodic performance tests, except you may elect to establish operating limit(s) for conditions other than those under which a performance test was conducted as specified in paragraph (e)(1) of this section and, if applicable, paragraph (e)(2) of this section.

\* \* \* \* \*

(2) If you elect to establish separate operating limits for different emission episodes, you must maintain records as specified in §63.8080(g) of each point at which you change from one

operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes.

\* \* \* \* \*

(g) Flow indicators. If flow to a control device could be intermittent, you must install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Periods of no flow may not be used in daily or block averages.

(h) On and after the compliance date specified in §63.7995(e), when determining compliance with the percent emission reduction requirements in Table 1 to this subpart, you must account for the time that the control device was bypassed. You must use Equation 1 of this section to determine the allowable total hours of bypass for each semi-annual compliance period. To demonstrate compliance, the actual total hours of bypass must not exceed the allowable total hours of bypass calculated by Equation 1 of this section.

$$T_{byp} = (R - OCE) / R * T_{op} \qquad \text{Eq. 1}$$

$T_{byp}$  = Total allowable source operating time (hours) when the control device for stationary process vessels can be bypassed during the semiannual compliance period for any reason.

$R$  = Control efficiency of control device, percent, as determined by Equation 6 in §63.997(e)(2)(iv)(C).

$OCE$  = The applicable percent emission reduction requirement in Table 1 to this subpart.

$T_{op}$  = Total source operating time (hours) for stationary process vessels during the semiannual compliance period.

7. Section 63.8010 is amended by revising paragraph (a) to read as follows:

**§63.8010 What requirements apply to my storage tanks?**

(a) You must meet each emission limit in Table 2 to this subpart that applies to your storage tanks, and you must meet each applicable requirement specified in §63.8000(b). For each control device used to comply with Table 2 to this subpart, you must comply with subpart SS of this part 63 as specified in §63.8000(c), except as specified in §63.8000(d) and (f), and paragraphs (b) through (d) of this section.

\* \* \* \* \*

8. Section 63.8025 is amended by revising paragraph (a) to read as follows:

**§63.8025 What requirements apply to my transfer operations?**

(a) You must comply with each emission limit and work practice standard in Table 5 to this subpart that applies to your transfer operations, and you must meet all applicable requirements specified in §63.8000(b). For each control device used to comply with Table 5 to this subpart, you must comply with subpart SS of this part 63 as specified in §63.8000(c), except as specified in §63.8000(d) and (f), and paragraph (b) of this section.

\* \* \* \* \*

9. Section 63.8050 is amended by adding paragraphs (c)(3)(i) through (c)(3)(iii) to read as follows:

**§63.8050 How do I comply with emissions averaging for stationary process vessels at existing sources?**

\* \* \* \* \*

(c) \* \* \*

(3) \* \* \*

(i) If emissions are routed through a closed-vent system to a condenser control device, determine controlled emissions using the procedures specified in §63.1257(d)(3).

(ii) If emissions are routed through a closed-vent system to any control device other than a condenser, determine actual emissions after determining the efficiency of the control device using the procedures in subpart SS of this part 63 as specified in §63.8000(c).

(iii) If the vessel is vented to the atmosphere, then actual emissions are equal to the uncontrolled emissions estimated in accordance with paragraph (c)(1) of this section.

\* \* \* \* \*

10. Section 63.8055 is amended by revising paragraphs (b)(1), (2), and (4) to read as follows:

**§63.8055 How do I comply with a weight percent HAP limit in coating products?**

\* \* \* \* \*

(b) \* \* \*

(1) Method 311 (appendix A to 40 CFR part 63). As an alternative to Method 311, you may use California Air Resources Board Method 310, Determination of Volatile Organic Compounds in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products for use with aerosol cans.

(2) Method 24 (appendix A to 40 CFR part 60). You may use Method 24 to determine the mass fraction of volatile matter and use that value as a substitute for the mass fraction of HAP, or one of the alternatives in paragraph (b)(1)(i) through (iii) of this section.

(i) ASTM D2369-10(2015)e, (incorporated by reference, see §63.14);

(ii) ASTM D2697-03 (2014) (incorporated by reference, see §63.14); or

(iii) ASTM D3960-98 (incorporated by reference, see §63.14).

\* \* \* \* \*

(4) You may rely on formulation data from raw material suppliers if it represents each organic HAP that is present at 0.1 percent by mass or more for the HAP listed in Table 11 to this subpart, and at 1.0 percent by mass or more for other compounds. If the HAP weight percent estimated based on formulation data conflicts with the results of a test conducted according to paragraphs (b)(1) through (3) of this section, then there is a rebuttal presumption that the test results are accurate unless, after consultation, you demonstrate to the satisfaction of the permitting authority that the test results are not accurate and that the formulation data are more appropriate.

11. Section 63.8070 is amended by revising paragraph (c) to read as follows:

**§63.8070 What notifications must I submit and when?**

\* \* \* \* \*

(c) Notification of performance test. If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in §63.7(b)(1). For any performance test required as part of the compliance procedures for process vessels in Table 1 to this subpart, you must also submit the test plan required by §63.7(c) and the emission profile with the notification of the performance test.

12. Section 63.8075 is amended by:

- a. Revising paragraph (c)(1);
- b. Revising paragraph (d) introductory text and paragraphs (d)(1) and (d)(2)(ii);

- c. Revising paragraph (e)(5) introductory text and paragraph (e)(6)(ii)(B);
- d. Adding paragraph (e)(6)(ii)(D);
- e. Revising paragraph (e)(6)(iii) introductory text and paragraphs (e)(6)(iii)(C) and (e)(6)(iii)(E);
- f. Adding paragraph (e)(6)(iii)(L);
- g. Removing and reserving paragraph (e)(8)(ii)(B); and
- h. Adding paragraphs (f) through (k).

The revisions and additions read as follows:

**§63.8075 What reports must I submit and when?**

\* \* \* \* \*

(c) \* \* \*

(1) Requests for approval to set operating limits for parameters other than those specified in §§63.8005 through 63.8030, including parameters for enhanced biological treatment units.

Alternatively, you may make these requests according to §63.8(f).

\* \* \* \* \*

(d) Notification of compliance status report. You must submit a notification of compliance status report according to the schedule in paragraph (d)(1) of this section, and the notification of compliance status report must include the information specified in paragraph (d)(2) of this section.

(1) You must submit the notification of compliance status report no later than 150 days after the applicable compliance date specified in §63.7995. You must submit a separate notification of compliance status report after the applicable compliance date specified in §63.7995(e).

(2) \* \* \*

(ii) The results of performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate compliance according to §§63.8005 through 63.8030 and 63.8055. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

\* \* \* \* \*

(e) \* \* \*

(5) For each SSM during which excess emissions occur, the compliance report must include the information specified in paragraphs (e)(5)(i) and (ii) of this section. On and after the compliance date specified in §63.7995(e), these paragraphs (e)(5), (e)(5)(i), and (e)(5)(ii) of this section no longer apply.

\* \* \* \* \*

(6) \* \* \*

(ii) \* \* \*

(B) Before the compliance date specified in §63.7995(e), information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. On and after the compliance date specified in §63.7995(e), report the number of failures to meet an applicable standard. For each instance, report the date, time and duration of each failure. For each failure the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

\* \* \* \* \*

(D) On and after the compliance date specified in §63.7995(e), report the total bypass hours, as monitored according to the provisions of §63.8080(h).

(iii) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply with the emission limit in this subpart, you must include the information in paragraphs (e)(6)(iii)(A) through (L) of this section. This includes periods of SSM.

\* \* \* \*

(C) Before the compliance date specified in §63.7995(e), the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period. On and after the compliance date specified in §63.7995(e), report the number of failures to meet an applicable standard. For each instance, report the date, time and duration of each failure. For each failure the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

\* \* \* \*

(E) Before the compliance date specified in §63.7995(e), a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. On and after the compliance date specified in §63.7995(e), a breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

\* \* \* \* \*

(L) A summary of the total duration of CMS data unavailability during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

\* \* \* \* \*

(f) Performance test report. On and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], within 60 days after the date of completing each performance test required by §§63.8000, 63.8005, or 63.8010 of this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (f)(1) through (3) of this section. The requirements of this paragraph (f) do not affect the schedule for completing performance tests specified in §§63.8000, 63.8005, and 63.8010.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test.* Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of

the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT web site at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim that some of the performance test information being submitted under paragraph (f) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT web site. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (f) of this section.

(g) Performance evaluation report. On and after **[DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, within 60 days after the date of completing each continuous monitoring system (CMS) performance evaluation (as defined in §63.2), you must submit the results of the performance evaluation following the procedures specified in paragraphs (g)(1) through (3) of this section.

(1) *Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation.* Submit the results of the performance evaluation to the EPA via CEDRI, which can be accessed through the EPA's CDX. The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website.

(2) *Performance evaluations of CMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation.* The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (a) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (a) of this section.

(h) You must submit to the Administrator initial compliance reports, notification of compliance status reports, and compliance reports of the following information. Beginning on and after **[DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE**

**FEDERAL REGISTER]**, submit all subsequent reports following the procedure specified in paragraph (i) of this section.

(i) If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov>).

(1) Compliance reports. The requirements of this paragraph (i) do not affect the schedule for submitting the initial notification or the notification of compliance status reports. You must use the appropriate electronic compliance report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website.

(2) Initial notification reports and notification of compliance status reports.

You must upload to CEDRI a PDF file of each initial notification and of each notification of compliance status.

(3) All reports. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website, where applicable. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd.,

Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(j) Extensions for CDX / CEDRI Outages and Force Majeure Events. If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (j)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned/

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(k) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (k)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

- (i) A written description of the force majeure event;
  - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
  - (iii) Measures taken or to be taken to minimize the delay in reporting; and
  - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

13. Section 63.8080 is amended by:

- a. Revising the introductory paragraph;
- b. Revising paragraphs (c), (e), and (f); and
- c. Adding paragraphs (h) through (j).

The revisions and additions read as follows:

### **§63.8080 What records must I keep?**

You must keep the records specified in paragraphs (a) through (h) of this section.

\* \* \* \* \*

(c) Before the compliance date specified in §63.7995(e), a record of each time a safety device is opened to avoid unsafe conditions in accordance with §63.8000(b)(2). On and after the compliance date specified in §63.7995(e), the information in this paragraph (c).

- (1) The source, nature, and cause of the opening.
- (2) The date, time, and duration of the opening.

(3) An estimate of the quantity of total HAP emitted during the opening and the method used for determining this quantity.

\* \* \* \* \*

(e) Before the compliance date specified in §63.7995(e), for each CEMS, you must keep the records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. On and after the compliance date specified in §63.7995(e), for each CEMS, you must keep the records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(f) Before the compliance date specified in §63.7995(e), in the SSMP required by §63.6(e)(3), you are not required to include Group 2 or non-affected emission points. For equipment leaks only, the SSMP requirement is limited to control devices and is optional for other equipment. On and after the compliance date specified in §63.7995(e), the requirements of this paragraph (f) no longer apply.

\* \* \* \* \*

(h) On and after the compliance date specified in §63.7995(e), records of the total source operating time (hours) for stationary process vessels during the semiannual compliance period, and the source operating time (hours) when the control device for stationary process vessels was bypassed during the semiannual compliance period for any reason, as used in determining compliance with the percent emission reduction requirements in Table 1 to this subpart, as specified in §63.8005(h).

(i) On and after the compliance date specified in §63.7995(e), for each deviation from an emission limitation reported under §63.8075(e)(5), a record of the information specified in paragraphs (i)(1) and (2) of this section, as applicable.

(1) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time and duration of each failure.

(2) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(j) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

14. Section 63.8090 is amended by revising paragraph (b) to read as follows:

**§63.8090 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?**

\* \* \* \* \*

(b) Compliance with 40 CFR part 60, subpart Kb. After the compliance dates specified in §63.7995, you are in compliance with this subpart for any storage tank that is assigned to miscellaneous coating manufacturing operations and that is both controlled with a floating roof and in compliance with the provisions of 40 CFR part 60, subpart Kb. You are in compliance with this subpart if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with 40 CFR part 60, subpart Kb, and you are in compliance with the monitoring, recordkeeping, and reporting requirements in this subpart. You must also identify in

your notification of compliance status report required by §63.8075(d) which storage tanks are in compliance with 40 CFR part 60, subpart Kb.

\* \* \* \* \*

15. Section 63.8105 is amended by:

a. In paragraph (g), revising the definitions for “Deviation” and “Process vessel vent”;

and

b. In paragraph (g), removing the definition for “Small control device”.

The revisions read as follows:

**§63.8105 What definitions apply to this subpart?**

\* \* \* \* \*

(g) \* \* \*

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Before the compliance date specified in §63.7995(e), fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. On and after the compliance date specified in §63.7995(e), this paragraph (3) no longer applies.

\* \* \* \* \*

*Process vessel vent* means a vent from a process vessel or vents from multiple process vessels that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Emission streams that are undiluted and uncontrolled containing less than 50 ppmv HAP, as determined through process knowledge that no HAP are present in the emission stream or using an engineering assessment as discussed in §63.1257(d)(2)(ii), test data using Method 18 of 40 CFR part 60, appendix A, or any other test method that has been validated according to the procedures in Method 301 of appendix A of this part, are not considered process vessel vents. Flexible elephant trunk systems when used with closed vent systems and drawing ambient air (*i.e.*, the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened are not process vessel vents. Process vessel vents do not include vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the requirements in Table 3 of this subpart. A gas stream going to a fuel gas system is not a process vessel vent. A gas stream routed to a process for a process purpose is not a §63.8075 vent.

\* \* \* \* \*

16. Table 1 to Subpart HHHHH of Part 63 is amended by revising row 4 to read as follows:

**Table 1 to Subpart HHHHH of Part 63—Emission Limits and Work Practice Standards for Process Vessels**

\* \* \* \* \*

For each . . .	You must . . .	And you must . . .
* * * * *		

For each . . .	You must . . .	And you must . . .
4. Halogenated vent stream from a process vessel subject to the requirements of item 2 or 3 of this table for which you use a combustion control device to control organic HAP emissions	<p>a. Use a halogen reduction device after the combustion control device; or</p> <p>b. Use a halogen reduction device before the combustion control device</p>	<p>i. Reduce overall emissions of hydrogen halide and halogen HAP by <math>\geq 95</math> percent; or</p> <p>ii. Reduce overall emissions of hydrogen halide and halogen HAP to <math>\leq 0.45</math> kilogram per hour (kg/hr).</p> <p>Reduce the halogen atom mass emission rate to <math>\leq 0.45</math> kg/hr.</p>

17. Table 3 to Subpart HHHHH of Part 63 is revised to read as follows:

**Table 3 to Subpart HHHHH of Part 63—Requirements for Equipment Leaks**

As required in §63.8015, you must meet each requirement in the following table that applies to your equipment leaks.

For all . . .	You must . . .
1. Equipment that is in organic HAP service at an existing source	<p>a. Comply with the requirements in §§63.424(a) through (d) and 63.428(e), (f), and (h)(4), except as specified in §63.8015(b); or</p> <p>b. Comply with the requirements of subpart TT of this part, except as specified in §63.8000(f); or</p> <p>c. Comply with the requirements of subpart UU of this part, except as specified in §§63.8000(f) and 63.8015(c) and (d).</p>

2. Equipment that is in organic HAP service at a new source	<p>a. Comply with the requirements of subpart TT of this part, except as specified in §63.8000(f); or</p> <p>b. Comply with the requirements of subpart UU of this part, except as specified in §§63.8000(f) and 63.8015(c) and (d).</p>
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18. The title of Table 8 to Subpart HHHHH of Part 63 is amended to read as follows:

**Table 8 to Subpart HHHHH of Part 63—Soluble Hazardous Air Pollutants**

As specified in §63.8020, the soluble HAP in wastewater that are subject to management and treatment requirements of this subpart are listed in the following table:

\* \* \* \* \*

19. Table 9 to Subpart HHHHH of Part 63 is amended by adding rows 4 and 5 to read as follows:

**Table 9 to Subpart HHHHH of Part 63—Requirements for Reports**

As required in §63.8075(a) and (b), you must submit each report that applies to you on the schedule shown in the following table:

<b>You must submit a . . .</b>	<b>The report must contain . . .</b>	<b>You must submit the report . . .</b>
* * * * *		
4. Performance test report	The information specified in §63.8075(f)	Within 60 days after completing each performance test according to the requirements in §63.8075(f)

5. Performance evaluation report	The information specified in §63.8075(g)	Within 60 days after completing each continuous monitoring system (CMS) performance evaluation according to the requirements in §63.8075(g)
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20. Table 10 to Subpart HHHHH of Pat 63 is revised to read as follows:

**Table 10 to Subpart HHHHH of Part 63—Applicability of General Provisions to Subpart HHHHH**

As specified in §63.8095, the parts of the General Provisions that apply to you are shown in the following table:

<b>Citation</b>	<b>Subject</b>	<b>Explanation</b>
§63.1	Applicability	Yes.
§63.2	Definitions	Yes.
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities	Yes.
§63.5	Construction/Reconstruction	Yes.
§63.6(a)	Applicability	Yes.
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed sources	Yes.
§63.6(b)(5)	Notification	Yes.
§63.6(b)(6)	[Reserved]	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes.
§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Yes.
§63.6(c)(3)-(4)	[Reserved]	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become	Yes.

Citation	Subject	Explanation
	Major	
§63.6(d)	[Reserved]	
§63.6(e)(1)(i)	General Duty to minimize emissions.	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e). See 63.8000(a) for general duty requirement.
§63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as possible	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e).
§63.6(e)(1)(iii)-(2)	Operation & Maintenance	Yes.
§63.6(e)(3)	Startup, shutdown, and malfunction plan.	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e).
§63.6(f)(1)	Compliance Except During SSM	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e).
§63.6(f)(2)-(3)	Methods for Determining Compliance	Yes.
§63.6(g)(1)-(3)	Alternative Standard	Yes.
§63.6(h)(1)	SSM Exemption	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e)
§63.6(h)(2)-(9)	Opacity/Visible Emission (VE) Standards	Only for flares for which Method 22 observations are required as part of a flare compliance assessment.
§63.6(i)(1)-(14)	Compliance Extension	Yes.
§63.6(j)	Presidential Compliance Exemption	Yes.
§63.7(a)(1)-(2)	Performance Test Dates	Yes, except substitute 150 days for 180 days.
§63.7(a)(3)-(4)	CAA Section 114 Authority, Force Majeure	Yes, and these paragraphs also apply to flare compliance assessments as specified

<b>Citation</b>	<b>Subject</b>	<b>Explanation</b>
		under §63.997(b)(2).
§63.7(b)(1)	Notification of Performance Test	Yes.
§63.7(b)(2)	Notification of Rescheduling	Yes.
§63.7(c)	Quality Assurance/Test Plan	Yes, except the test plan must be submitted with the notification of the performance test if the control device controls process vessels.
§63.7(d)	Testing Facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Yes, before the compliance date specified in §63.7995(e), except that performance tests for process vessels must be conducted under worst-case conditions as specified in §63.8005. No, on and after the compliance date specified in §63.7995(e). See §63.8005(d).
§63.7(e)(2)	Conditions for Conducting Performance Tests	Yes.
§63.7(e)(3)	Test Run Duration	Yes.
§63.7(f)	Alternative Test Method	Yes.
§63.7(g)	Performance Test Data Analysis	Yes.
§63.7(h)	Waiver of Tests	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Yes.
§63.8(a)(2)	Performance Specifications	Yes.
§63.8(a)(3)	[Reserved]	
§63.8(a)(4)	Monitoring with Flares	Yes.
§63.8(b)(1)	Monitoring	Yes.
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes.
§63.8(c)(1)(i)	Maintain and operate CMS	Yes, before the compliance date specified in §63.7995(e). No, on and after the

Citation	Subject	Explanation
		compliance date specified in §63.7995(e). See §63.8000(a) for the general duty to maintain and operate each CMS.
§63.8(c)(1)(ii)	Routine repairs	Yes.
§63.8(c)(1)(iii)	Requirement to develop SSM plan for CMS	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e).
§63.8(c)(2)-(3)	Monitoring System Installation	Yes.
§63.8(c)(4)	Requirements	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part. This subpart does not contain requirements for continuous opacity monitoring systems (COMS).
§63.8(c)(4)(i)	CMS Requirements	No. This subpart does not require COMS.
§63.8(c)(4)(ii)	CMS requirements	Yes.
§63.8(c)(5)	COMS Minimum Procedures	No. This subpart does not contain opacity or VE limits.
§63.8(c)(6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part.
§63.8(c)(7)-(8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subpart SS of this part.
§63.8(d)(1)-(2)	CMS Quality Control	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part.
§63.8(d)(3)	Written procedures for CMS	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e). See §63.8000(d)(8).
§63.8(e)	CMS Performance Evaluation	Section 63.8(e)(6)(ii) does not apply because this subpart does not require COMS. Other sections apply only for CEMS; requirements for CPMS are specified in referenced subpart SS of this

Citation	Subject	Explanation
		part.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Yes, except you may also request approval using the precompliance report.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Only for CEMS.
§63.8(g)(1)-(4)	Data Reduction	Only when using CEMS, except §63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in §63.8000(d)(4)(iv). The requirements for CPMS do not apply because this subpart has no opacity or VE limits.
§63.8(g)(5)	Data Reduction	No. Requirements for CEMS are specified in §63.8000(d)(4). Requirements for CPMS are specified in referenced subpart SS of this part.
§63.9(a)	Notification Requirements	Yes.
§63.9(b)(1)-(5)	Initial Notifications	Yes.
§63.9(c)	Request for Compliance Extension	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	Yes.
§63.9(e)	Notification of Performance Test	Yes.
§63.9(f)	Notification of VE/Opacity Test	No. This subpart does not contain opacity or VE limits.
§63.9(g)	Additional Notifications When Using CMS	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part.
§63.9(h)(1)-(6)	Notification of Compliance Status	Yes, except this subpart has no opacity or VE limits, and §63.9(h)(2) does not apply because §63.8075(d) specifies the required contents and due date of the notification of compliance status report.
§63.9(i)	Adjustment of Submittal Deadlines	Yes.

Citation	Subject	Explanation
§63.9(j)	Change in Previous Information	No, §63.8075(e)(8) specifies reporting requirements for process changes.
§63.10(a)	Recordkeeping/Reporting	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	Yes.
§63.10(b)(2)(i)-(ii)	Records related to SSM	No. Before the compliance date specified in §63.7995(e), see §§63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) for recordkeeping requirements for periods of SSM. On and after the compliance date specified in §63.7995(e), see §63.8080(i).
§63.10(b)(2)(iii)	Records related to maintenance of air pollution control equipment	Yes.
§63.10(b)(2)(iv)-(v)	Records related to SSM	Yes, before the compliance date specified in §63.7995(e). No, on and after the compliance date specified in §63.7995(e).
§63.10(b)(2)(vi), (x), and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part.
§63.10(b)(2)(vii)-(ix)	Records	Yes.
§63.10(b)(2)(xii)	Records	Yes.
§63.10(b)(2)(xiii)	Records	Yes.
§63.10(b)(2)(xiv)	Records	Yes.
§63.10(b)(3)	Records	Yes.
§63.10(c)(1)-(6),(9)-(14)	Records	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of this part.
§63.10(c)(7)-(8), (15)	Records	No. Recordkeeping requirements are specified in §63.8080.
§63.10(d)(1)	General Reporting Requirements	Yes.
§63.10(d)(2)	Report of Performance Test Results	Yes.

<b>Citation</b>	<b>Subject</b>	<b>Explanation</b>
§63.10(d)(3)	Reporting Opacity or VE Observations	No. This subpart does not contain opacity or VE limits.
§63.10(d)(4)	Progress Reports	Yes.
§63.10(d)(5)(i)	SSM Reports	No. Before the compliance date specified in §63.7995(e), see §63.8075(e)(5) and (6) for the SSM reporting requirements. On and after the compliance date specified in §63.7995(e), these requirements no longer apply.
§63.10(d)(5)(ii)	Immediate SSM reports	No.
§63.10(e)(1)-(2)	Additional CMS Reports	Only for CEMS, but §63.10(e)(2)(ii) does not apply because this subpart does not require COMS.
§63.10(e)(3)	Reports	No. Reporting requirements are specified in §63.8075.
§63.10(e)(3)(i)-(iii)	Reports	No. Reporting requirements are specified in §63.8075.
§63.10(e)(3)(iv)-(v)	Excess Emissions Reports	No. Reporting requirements are specified in §63.8075.
§63.10(e)(3)(vi-viii)	Excess Emissions Report and Summary Report	No. Reporting requirements are specified in §63.8075.
§63.10(e)(4)	Reporting COMS data	No. This subpart does not contain opacity or VE limits.
§63.10(f)	Waiver for Recordkeeping/Reporting	Yes.
§63.11	Control and work practice requirements	Yes.
§63.12	Delegation	Yes.
§63.13	Addresses	Yes.
§63.14	Incorporation by Reference	Yes.
§63.15	Availability of Information	Yes.

21. Table 11 to Subpart HHHHH of Part 63 is added to read as follows:

**Table 11 to Subpart HHHHH of Part 63—List of Hazardous Air Pollutants That Must Be Counted Toward Total Organic HAP Content if Present at 0.1 Percent or More by Mass**

Chemical Name	CAS No.
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,1-Dimethylhydrazine	57-14-7
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Diphenylhydrazine	122-66-7
1,3-Butadiene	106-99-0
1,3-Dichloropropene	542-75-6
1,4-Dioxane	123-91-1
2,4,6-Trichlorophenol	88-06-2
2,4/2,6-Dinitrotoluene (mixture)	25321-14-6
2,4-Dinitrotoluene	121-14-2
2,4-Toluene diamine	95-80-7
2-Nitropropane	79-46-9
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
4,4'-Methylene bis(2-chloroaniline)	101-14-4
Acetaldehyde	75-07-0
Acrylamide	79-06-1
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
alpha-Hexachlorocyclohexane (a-HCH)	319-84-6
Aniline	62-53-3
Benzene	71-43-2
Benzidine	92-87-5

<b>Chemical Name</b>	<b>CAS No.</b>
Benzotrichloride	98-07-7
Benzyl chloride	100-44-7
beta-Hexachlorocyclohexane (b-HCH)	319-85-7
Bis(2-ethylhexyl)phthalate	117-81-7
Bis(chloromethyl)ether	542-88-1
Bromoform	75-25-2
Captan	133-06-2
Carbon tetrachloride	56-23-5
Chlordane	57-74-9
Chlorobenzilate	510-15-6
Chloroform	67-66-3
Chloroprene	126-99-8
Cresols (mixed)	1319-77-3
DDE	3547-04-4
Dichloroethyl ether	111-44-4
Dichlorvos	62-73-7
Epichlorohydrin	106-89-8
Ethyl acrylate	140-88-5
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Ethylene thiourea	96-45-7
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1

<b>Chemical Name</b>	<b>CAS No.</b>
Hexachlorobutadiene	87-68-3
Hexachloroethane	67-72-1
Hydrazine	302-01-2
Isophorone	78-59-1
Lindane (hexachlorocyclohexane, all isomers)	58-89-9
m-Cresol	108-39-4
Methylene chloride	75-09-2
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Nitrosodimethylamine	62-75-9
o-Cresol	95-48-7
o-Toluidine	95-53-4
Parathion	56-38-2
p-Cresol	106-44-5
p-Dichlorobenzene	106-46-7
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Propoxur	114-26-1
Propylene dichloride	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Tetrachloroethene	127-18-4
Toxaphene	8001-35-2
Trichloroethylene	79-01-6
Trifluralin	1582-09-8
Vinyl bromide	593-60-2

<b>Chemical Name</b>	<b>CAS No.</b>
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4

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